

## **ANNEX G: WILDLIFE PROTECTION GUIDELINES FOR ALASKA**

**General:** The following referenced guidelines cover the protection of wildlife within the State of Alaska. Consistent with the provision of the National Contingency Plan, the Alaska Regional Response Team (ARRT), through its Wildlife Protection Working Group, developed these guidelines. The guidelines were subsequently approved by the ARRT, which includes the State of Alaska. The latest update to these guidelines was coordinated by the Wildlife Protection Working Group and approved by the ARRT in January 1997. The guidelines are available on the ARRT website at: <http://www.akrrt.org/UnifiedPlan/uniG.html>.

To obtain a current copy of the Wildlife Protection Guidelines for Alaska contact the following agency (or download the document from the above website):

*Department of the Interior  
Office of Environmental Policy and Compliance  
1689 C Street, Rm. 119  
Anchorage, Alaska 99501-5126  
(907) 271-5011 271-4102 (Fax)*

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## **ANNEX G**

### **ALASKA FEDERAL/STATE PREPAREDNESS PLAN FOR RESPONSE TO OIL AND HAZARDOUS SUBSTANCE DISCHARGES/RELEASES (UNIFIED PLAN, VOLUME I)**

#### **WILDLIFE PROTECTION GUIDELINES FOR ALASKA**

Alaska Regional Response Team, Wildlife Protection Working Group  
January 22, 1997  
(Third Revision)

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## 100. Introduction.

## 101. Background.

The coastline of Alaska and its offshore areas provide seasonal feeding, breeding, reproducing, and staging grounds for large numbers of migratory birds and marine and terrestrial mammals. In some cases, the major portion of the world's population of a particular species may be present. Moreover, these wildlife populations represent important subsistence resources.

Because of their interdependence with the marine environment, it is possible that wildlife may -- during an oil spill that affects offshore or coastal areas -- contact oil on the water surface and/or along shorelines, marshes, or tide lands. The number of individuals and species affected will depend on several variables, such as the location and size of the spill, the characteristics of the oil, weather and water conditions, types of habitats affected, and the time of year the spill occurs.

The Alaska Regional Response Team (RRT) recognized that guidance for dealing with oiled wildlife was not specifically provided in either the *National Contingency Plan (NCP)* or the *Alaska Federal/State Preparedness Plan for Response to Oil and Hazardous Substance Discharges/Releases (Unified Plan, Volume I)*. In September 1987, at the request of the Co-Chairs of the Alaska RRT, a working group was established to develop appropriate Guidelines that Federal On-Scene Coordinators (OSC) could use during a federally-funded response to an oil spill.

## 102. Objectives.

Initially, the objectives of the working group focused on developing guidelines for capturing and treating oiled wildlife. As information relative to the guidelines was collected, these objectives were expanded to encompass a broader definition of wildlife protection. This new definition more clearly described all the steps that could be taken to protect wildlife during an oil spill.

The primary response strategy for wildlife protection emphasizes controlling the release and spread of spilled oil at the source to prevent or reduce contamination of potentially-affected species and/or their habitat. Primary response strategies may include mechanical cleanup, protective booming, *in situ* burning, and dispersant use. In addition, the primary response strategy includes the removal of oiled debris, particularly contaminated food sources (such as dead wildlife carcasses) both in water and on land. Decisions regarding the use of dispersants are made by the Federal OSC in accordance with procedures described in the "Alaska RRT Dispersant Use Guidelines for Alaska" (see Annex F, Appendix I of the *Unified Plan, Volume I*). Decisions regarding the use of *in situ* burning are made by the Federal OSC in accordance with the Alaska RRT-approved "In-Situ Burning Guidelines for Alaska" (see Annex F, Appendix II of the *Unified Plan, Volume I*).

The secondary response strategy emphasizes keeping potentially affected wildlife away from oiled areas through the use of deterrent techniques. These techniques may include visual methods (e.g., placing floating or stationary human effigies or helium-filled balloons on or near beaches), auditory methods (e.g., firing propane cannons and AV-alarms), and other methods (e.g., capture and relocation).

The tertiary response strategy, which is a last-resort strategy, addresses the potential capture and treatment of oiled wildlife. Typically only a small percentage of wildlife that are highly sensitive to the effects of oiling (e.g., birds and sea otters) and are oiled will be captured. Of those, only a portion will survive the treatment process. Decisions to capture and treat oiled wildlife involve consideration of factors identified in Appendix 1.

Response activities should also be conducted in a manner that minimizes adverse effects to wildlife. For example, techniques need to be identified that prevent: (1) unnecessary or illegal disturbance to sensitive species and habitats such as nesting raptors, seabird rookeries, and marine mammals haulouts and pupping areas; (2) potential injury and/or disturbance of bears by spill-related response personnel; (3) illegal collection of wildlife parts by spill-response personnel; and (4) wildlife contacts with cleaning agents and/or bioremediation substances used for shoreline treatment. Sections 301.B.1 and 302.B.1 contain general suggestions to minimize adverse effects to wildlife from response activities. The precise techniques need to be identified on a spill-specific basis.

### 103. Scope of Wildlife Protection Guidelines for Alaska.

#### A. Geographic Area.

Consistent with the *Unified Plan*, the Wildlife Protection Guidelines for Alaska (Guidelines) apply to both coastal marine and inland freshwater areas of Alaska. However, because of the potential for significant effects when oil spills occur in a marine environment, the Guidelines focus on wildlife species that inhabit offshore and coastal areas. It should be noted, however, that most of the information presented on response strategies for migratory birds applies to birds in general. In addition, information is presented on selected terrestrial mammals that could be affected by an oil spill in coastal and inland areas.

Alaska is divided into 10 subareas for contingency planning purposes. These subareas are shown on Figure 1. Information presented in Appendices 2-4 is organized by these planning areas.

#### B. Wildlife Resources.

The Guidelines focus on major wildlife resources at risk during an oil spill in offshore and/or coastal waters and along the Trans-Alaska Pipeline; namely, migratory birds, marine mammals, and terrestrial mammals. Migratory birds discussed in the Guidelines include waterfowl, seabirds, and terrestrial mammals. Migratory birds discussed in the

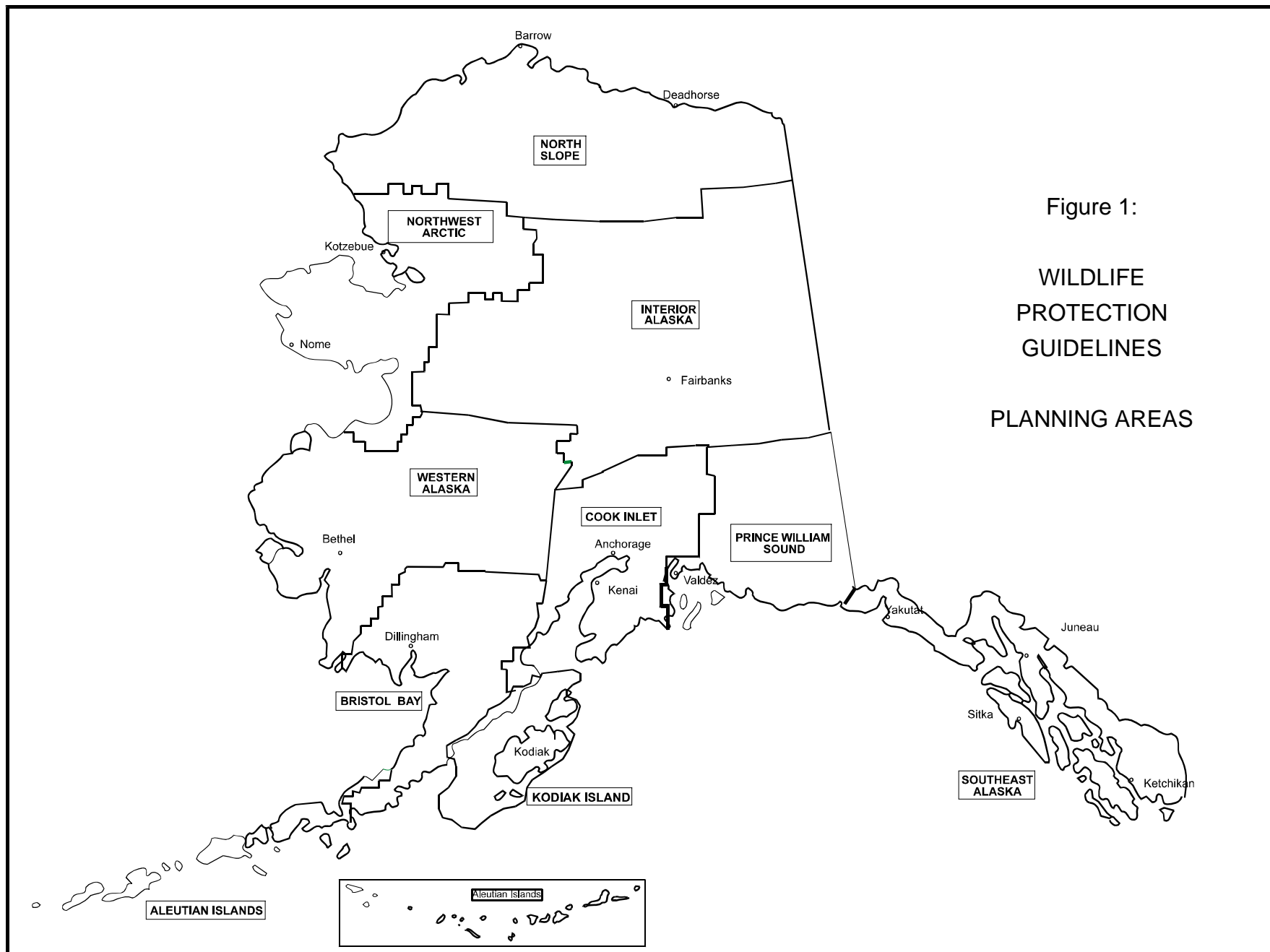


Figure 1:  
WILDLIFE  
PROTECTION  
GUIDELINES  
PLANNING AREAS

Guidelines include waterfowl, seabirds, diving birds, shorebirds, and raptors that prey on marine birds. Marine mammals include sea otters, pinnipeds, cetaceans, and polar bears. Terrestrial mammals include ungulates, bears, wolves, and furbearers. See Appendices 2, 3, and 4 for a detailed list of the species included in the Guidelines and their location by planning area.

#### 104. Working Group Organization and Development of Guidelines.

##### A. Working Group Organization.

Initially, the working group was called the Oiled Wildlife Working Group. It included six representatives from four federal and state entities: State of Alaska, Department of Fish and Game (ADF&G); U.S. Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA); U.S. Coast Guard; and the U.S. Department of the Interior (DOI), Fish and Wildlife Service (FWS), and Office of Environmental Policy and Compliance (whose representative chairs the working group). In 1989, a representative was added from the DOC, National Marine Fisheries Service (NMFS). These agencies are all represented on the Alaska RRT. Moreover, they all have statutory mandates to manage and/or protect the wildlife resources included in the Guidelines.

As a result of a public contact program, the working group's membership was expanded in 1988 to include representatives of three interest groups: the oil industry and environmental and Native groups. In 1992, an additional member was added to represent the Prince William Sound and Cook Inlet Regional Citizens' Advisory Councils and the Arctic Marine Resources Commission. See Appendix 5 for a list of the working group's current members.

##### B. Development of Guidelines.

Background research for the Guidelines was begun after the working group was organized in October 1987. Contacts were made in person or by telephone with approximately 45 representatives from the oil industry and environmental and Native groups. Technical experts with relevant knowledge also were contacted, and secondary source materials were utilized.

The Guidelines were prepared and submitted in draft form to members of the working group, federal and state agencies with statutory requirements to protect wildlife resources, technical experts, oil industry representatives, and members of the Native and environmental communities. The revised Guidelines were then presented to the Alaska RRT, which distributed them for public and agency review. Following incorporation of appropriate comments, the final Guidelines were adopted by the Alaska RRT on December 13, 1988.

#### 105. Procedures for Revisions and Updates.

The Guidelines will be reviewed and updated as necessary on a schedule that coincides with the annual review of the *Unified Plan, Volume 1*. Review of the Guidelines will be coordinated by the Chairperson of the Wildlife Protection Working Group. Following a review of proposed changes by working group members and their respective constituencies, the revised Guidelines will be submitted to the Alaska RRT for approval. The Alaska RRT Co-Chairmen will be responsible for publishing and distributing all changes. The first revision to the Guidelines was approved by the Alaska RRT on February 4, 1991; the second revision was approved on December 9, 1993; and the third revision was approved on January 22, 1997.

#### 106. Guidelines Organization.

Following the Introduction (Section 100), Section 200 briefly discusses the statutory responsibilities of federal and state agencies mandated to protect wildlife resources. In addition, the role of the Wildlife Protection Working Group, Federal OSC's, and specific wildlife resource agencies are identified.

Section 300 provides an overview of how the Guidelines relate to the existing federal oil-spill-response organization and the role of federal and state agency representatives during both a federally-funded response to an oil spill and a responsible party response to an oil spill. Appendices 9-16 contain a variety of information relevant to wildlife protection. Appendices 24 and 25 contain checklists to be completed by a party responding to an oil spill for requesting authorization to initiate secondary and/or tertiary wildlife response activities, respectively.

Section 400 and Appendices 6-8 provide resource information, suggested response strategies, response manuals, and agency contacts relevant to oiled or potential oiled migratory birds, marine mammals, and terrestrial mammals.

Section 500 and Appendices 17-20 contain information on equipment and materials for hazing unoiled migratory birds, and capturing and treating oiled migratory birds and sea otters. Appendix 21 provides a list of entities in Alaska with equipment and materials stockpiled for deterring unoiled wildlife and capturing and treating oiled wildlife.

Section 600 and Appendices 22 and 23 provide information on facility requirements for treating oiled migratory birds and sea otters.

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200. Statutory Responsibilities and Role of Participants.

201. Statutory Responsibility of NMFS, ADF&G, and FWS.

Under federal statutes, NMFS (under DOC) has responsibility for managing and protecting all cetaceans and pinnipeds, except walruses; FWS (under DOI) has responsibility for managing and protecting migratory birds, walruses, sea otters, and polar bears. Under State of Alaska statutes, ADF&G is mandated to manage and protect all wildlife resources and has joint statutory responsibilities with NMFS and FWS. FWS also has joint statutory responsibilities with ADF&G for wildlife on all federal lands in Alaska (i.e., national park system units, national wildlife refuges, national forest system lands, military reservations, and other DOI- and federally-managed public lands).

DOC through NMFS is responsible for the administration of the Endangered Species Act as it applies to certain cetaceans and pinnipeds in Alaska. These include eight species of endangered whales (i.e., fin, right, humpback, blue, sperm, bowhead, sei, and gray whale) and the threatened northern (Steller) sea lion. DOI through FWS is responsible for the administration of the Endangered Species Act as it applies to remaining marine mammals and terrestrial mammal and bird species in Alaska.

202. Role of Wildlife Protection Working Group.

The Wildlife Protection Working Group was established to develop guidelines for wildlife protection for use during a federally-funded response to an oil spill. The working group will continue to function under the Alaska RRT as a clearinghouse for wildlife protection information. In addition, the working group will conduct reviews and updates of the Guidelines.

203. Role of the Federal OSC and Alaska RRT.

A. Federal OSC.

In the event of a discharge or threatened discharge of oil, initial actions by the Federal OSC shall be to determine if actions taken by the party responsible for the incident are appropriate and satisfactory to terminate, contain, and remove the discharge or release. When the responsible party is taking appropriate action, the Federal OSC shall observe and monitor the response and provide advice, counsel, and logistical support as may be necessary (i.e., responsible party response).

Upon determining that an incident represents a significant threat to public health and welfare, the Federal OSC may direct the actions of the responsible party to ensure effective and immediate removal of a discharge, without initiating a federal assumption of the response. In addition, the

Federal OSC may request that wildlife resource agencies direct the actions of the responsible party to ensure that appropriate wildlife protection strategies are used.

If the Federal OSC finds that response actions are inappropriate or untimely, or if the responsible party is unknown, further response actions shall be taken in accordance with the NCP and Regional Plan (i.e., federally-funded response). All public information regarding wildlife response strategies will be released under the guidance of the Federal OSC.

B. Alaska RRT.

The Alaska RRT serves as a regional body for federal and state agencies to coordinate planning and preparedness activities in support of response operations for pollution incidents. Following an oil spill, specific information on wildlife resources at risk and appropriate wildlife response actions are made available to the Federal OSC through representatives of appropriate wildlife resource agencies.



### 300. Response Procedures.

Following an oil spill, the Federal OSC will determine if the responsible party is taking appropriate action (i.e., a responsible party response), or if a federally-funded response is required. If migratory birds, marine mammals, and/or terrestrial mammals are either potentially affected or affected by an oil spill, the Federal OSC may receive a request (via the checklists in Appendices 24 and/or 25) to conduct a wildlife protection/response program.

### 301. Federally-Funded Response.

#### A. Federal OSC.

Following an oil spill, the Federal OSC will consider the response strategies necessary to control the release and spread of spilled oil through mechanical cleanup, protective booming, dispersant use, and/or *in situ* burning. The Federal OSC will also consider the removal of oiled debris, particularly contaminated food sources (such as dead wildlife carcasses) both in the water and on land. The Guidelines recognize that, in terms of reducing or eliminating potential effects on wildlife, such strategies should constitute the primary response effort. The Federal OSC will receive input from representatives of appropriate wildlife resource agencies on important habitat and wildlife concentration areas where response actions should be centered. Since wildlife concentration areas may change with weather and seasons, this input may require direct observations by trained biologists. The *Unified Plan, Volume 1* outlines the Federal OSC's decision making process for obtaining Alaska RRT approval for selecting dispersant use and/or *in situ* burning as response options (see Annex F, Appendix 1 and Annex F, Appendix 2, respectively).

It is also possible that based on the recommendation of representatives of appropriate wildlife resource agencies, the Federal OSC will determine that secondary response strategies, namely, keeping wildlife away from oiled areas through the use of deterrents, are necessary. Options for deterrents are listed by species in Appendices 6-8.

In the event that wildlife are oiled, the Federal OSC, based on the recommendation of representatives of appropriate wildlife resource agencies, may decide to initiate a capture and treatment program under the leadership of appropriate federal agencies. A decision to initiate a wildlife capture and treatment program will be made by appropriate wildlife resource agencies and the Federal OSC following consideration of factors listed in Appendix 1. It is possible that based on the recommendation of representatives of appropriate wildlife resource agencies, the Federal OSC may determine that no response to protect wildlife resources will be taken.

#### B. Wildlife Resource Agencies.

During a federally-funded response to an oil spill, federal and state wildlife resource agencies assume lead roles for wildlife protection.

## 1. Wildlife Protection during Response Activities.

Additional direct and indirect wildlife impacts, including injury and death, may occur in conjunction with response activities. Incident-specific techniques will be identified by appropriate FWS, NMFS, and ADF&G representatives and utilized with Federal OSC concurrence to prevent (1) unnecessary or illegal disturbance to sensitive species and habitats, such as nesting raptors, seabird rookeries, and marine mammals haulouts and pupping areas; (2) potential injury and/or disturbance to bears by spill-related response personnel; (3) collection of wildlife parts by spill-response personnel for personal use; and (4) wildlife exposure to cleaning agents and/or bioremediation substances used for shoreline treatment.

### a. Prevention of Unnecessary or Illegal Disturbance to Sensitive Species and Habitats.

Field activities associated with oil spills, particularly those using helicopters and on-site work crews, have the potential for causing unnecessary and illegal disturbance to sensitive species and habitats. This disturbance may affect the survival of young wildlife and/or may result in wildlife becoming oiled.

The Bald Eagle Protection Act specifically prohibits the disturbance of raptors. Any actions that cause harassment or death of migratory birds is prohibited under the Migratory Bird Treaty Act.

The Marine Mammal Protection Act prohibits the taking of sea otters, seals, sea lions, walruses, whales, dolphins, and porpoises. Taking includes harassing or disturbing these animals as well as actual harming or killing. Section 109(h) of this act allows a taking by a federal or state governmental official during their official duties, provided the taking is for the welfare and protection of the animal. Accordingly, the Federal OSC is authorized to take marine mammals during an oil-spill response.

The Endangered Species Act, as amended, provides protective measures for species listed as threatened or endangered and their designated critical habitats. The Endangered Species Act prohibits federal agencies from jeopardizing the continued existence of listed species and, unless otherwise authorized, prohibits all parties from taking listed species. According to the Endangered Species Act, the term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such manner.

Section 7 of the Endangered Species Act requires any federal agency that authorizes, funds, or carries out activities that may affect listed species or critical habitat to consult with DOI (through FWS) and/or DOC (through NMFS). Therefore, the Federal OSC must immediately consult with FWS or NMFS whenever a response may affect these resources. The Endangered Species Act and its implementing regulations provide special provisions for consultations during emergencies such as oil spills.

FWS and/or NMFS may make recommendations to the Federal OSC to avoid the taking of listed species or to otherwise reduce response-related impacts. Formal consultation between the Federal OSC and FWS and/or NMFS (as appropriate) should occur immediately after the incident if adverse effects, including incidental take, of response activities on listed species are not eliminated through implementing informal consultation recommendations.

To reduce disturbance and improve the chances for wildlife survival, FWS, NMFS, and/or ADF&G representatives (as appropriate) should provide, through the Federal Aviation Administration and USCG, notices to aircraft and/or notices to mariners for areas affected by an oil spill (see Appendix 9 for an example). These advisories may request pilots and vessel operators to remain a certain distance from wildlife concentration areas and critical habitats. Such areas include, but are not limited to, marine mammal haulouts and pupping areas, migratory bird concentration areas, seabird rookeries, and raptor nests. Copies of any advisories should be sent by the Federal OSC to all federal and state agency and agency-contracted on-site personnel. In addition, a news release should be prepared by FWS, NMFS, and/or ADF&G representatives (as appropriate) on this subject for distribution by the Federal OSC to appropriate news media representatives (see Appendix 9 for an example).

During a response to an oil spill, appropriate wildlife resource agencies will evaluate the potential for response activities to negatively affect sensitive wildlife species and/or their habitats. As a result, wildlife resource agencies may recommend to the Federal OSC that response activities in or adjacent to sensitive species or areas be completed prior to or following critical biological periods. If that is not possible, wildlife resource agencies may further recommend to the Federal OSC that agency on-site monitors accompany near-shore and/or shore-based activities to help minimize or eliminate unacceptable levels of disturbance.

b. Prevention of Potential Injury and/or Disturbance to Bears.

When response workers are conducting on-shore activities, the potential exists for interaction with brown, black, and polar bears. In addition, polar bears may also be present offshore in frozen or broken ice conditions. Appropriate FWS and/or ADF&G representatives will coordinate with the Federal OSC to determine when stationing qualified bear guards (i.e., individuals with expertise in avoiding bear/human conflicts) with response-related work crews is necessary to help minimize injuries to both workers and bears. Bear guards should receive training in hazing bears away from an area, removing crews from a beach (to eliminate having to shoot a bear), and for shooting a bear if there is a threat to human life.

c. Prevention of the Collection of Wildlife Parts for Personal Use

Policies for response-related personnel should include prohibitions on the collection of whole or partial remains of wildlife for personal use. Wildlife remains include, but are not limited to, bones, feathers, teeth, ivory, and pelts.

FWS and/or NMFS (as appropriate) will provide information on prohibitions on the collection of whole or partial wildlife remains for personal use to the Federal OSC (see Appendix 10 for an example). The Federal OSC will then provide this information to all response parties, and federal and state agency and agency-contracted on-site personnel.

d. Prevention of Wildlife Contacts with Shoreline Treatment Chemicals.

It is possible that wildlife may contact cleaning agents and/or bioremediation substances used for shoreline treatment. The potential for wildlife contact and resulting irritation, injury, or death should be assessed by appropriate FWS, NMFS, and ADF&G representatives, who will provide recommendations to the Federal OSC on appropriate deterrent measures that must be included in any application plans and procedures.

2. Prevention of Adverse Secondary Oil Effects.

As stated above, scavenging of dead oiled wildlife may result in secondary poisoning due to hydrocarbon ingestion. To minimize the secondary impacts of an oil spill, dead oiled wildlife should be removed from the environment as quickly as possible under the authorization of FWS and/or NMFS. Appendix 11 lists data that are important to record for each dead animal collected. FWS and/or NMFS will recommend to the Federal OSC, an appropriate incident-specific approach for the retrieval and disposition of dead oiled wildlife that are their respective responsibility, including information about not collecting animals parts for personal use. ADF&G will assist FWS and/or NMFS on a case-by-case basis. See "Fax Cover Sheet" in Appendix 24 for a list of wildlife resource agency contacts.

3. Establishing Wildlife Collection Programs and Treatment Facilities.

Once a decision has been made by the appropriate wildlife resource agencies and the Federal OSC--based on the factors listed in Appendix 1--to establish a capture and treatment program for oiled birds and/or marine mammals, FWS and/or NMFS will assume lead responsibility for the following tasks, as appropriate, for wildlife resources under their respective jurisdiction<sup>1</sup>:

- Initiating contract(s) with appropriate organizations and/or individuals outside FWS and/or NMFS for the following:

Obtaining necessary equipment and materials for wildlife collection, transportation, and treatment.

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<sup>1</sup>It should be noted that wildlife response activities may include tasks in addition to those listed.

Acquiring appropriate treatment facilities. Since spills may cover large areas, the establishment of more than one treatment facility may be more efficient and better for affected wildlife.

Capturing oiled wildlife and transporting them to treatment facilities.

Treating oiled wildlife.

Organizing and using volunteers for appropriate assistance (see Section 301.B.4).

- Monitor contractor(s) compliance with permit requirements.
- Providing oversight of contracted operations.
- Preparing a spill-specific plan for the release and/or final disposition of rehabilitated wildlife.
- Transporting treated wildlife to release sites or securing space in appropriate marine aquariums and/or zoos.
- Ensuring information on wildlife response activities (e.g., number of species affected and number of species of live oiled wildlife collected and treated) is provided to the Federal OSC on a routine basis.
- Ensuring volunteers have appropriate training.

ADF&G will assist with the above tasks on a case-by-case basis. All funding for the tasks identified in this section must be pre-approved by the Federal OSC.

Appendix 13 provides an action-item checklist for wildlife resource agencies during the first 24 hours on-scene. Appendix 14 provides a checklist of suggested office supplies and documents to take on-scene.

#### 4. Using Volunteers for Wildlife Protection Activities.

Volunteers could be used to assist in the following:

- Administrative tasks--answering telephones, running errands; record keeping; soliciting donations of equipment and/or materials; organizing and tracking supplies.
- Wildlife collection--live birds and other wildlife, such as sea otters, as approved by appropriate wildlife resource agencies; dead wildlife.

- Treatment tasks--washing, drying, and feeding wildlife; food preparation; cleaning pens.

As stated in Section 301.B.3, following the establishment of a wildlife collection and treatment program, FWS and/or NMFS (as appropriate) will assume lead responsibility for ensuring volunteers have appropriate training.

## 5. Funding.

Federal and/or state resource agencies may request monies through the Federal OSC from the Oil Spill Liability Trust Fund (OSLTF) to pay for incremental costs of agency personnel who are providing pre-approved wildlife-related assistance to the Federal OSC. In the event that the Federal OSC approves wildlife deterrent and/or capture and treatment programs, the Federal OSC will provide appropriate federal and/or state resource agencies with monies from the OSLTF to initiate, conduct, and oversee FOSC-approved activities. See Annex C, Appendix I, *Unified Plan, Volume 1* for additional information on the use of the OSLTF.

## 302. Responsible Party Response.

### A. Federal OSC.

During a responsible party response to an oil spill, the Federal OSC will direct methods used by the responsible party to control the release and spread of spilled oil through mechanical cleanup, protective booming, dispersant use, and/or *in situ* burning. The Federal OSC will also direct responsible party actions to remove oiled debris, particularly contaminated food sources (such as dead wildlife carcasses) both in the water and on land. The Federal OSC will call upon representatives of appropriate wildlife resource agencies for input on important habitat and wildlife concentration areas where response actions should be centered from a wildlife protection perspective. Since wildlife concentration areas may change based on weather and season, this input may require direct observations by trained biologists.

As specified in the checklists in Appendices 24 and 25, the Federal OSC will forward all requests to conduct secondary or tertiary response strategies to appropriate wildlife resource agency representatives. Following input from those agencies (Section VI of Appendix 24, and Section IX of Appendix 25), the Federal OSC--in conjunction with any State OSC--will act on the request (Section VII of Appendix 24, Section X of Appendix 25). Furthermore, the Federal OSC will monitor any authorized secondary and/or tertiary response strategies undertaken by the responsible party.

### B. Wildlife Resource Agencies.

As stated above, the Federal OSC will provide wildlife resource agency representatives with copies of requests to conduct wildlife hazing and/or capture and treatment programs (see checklists in Appendices 24 and 25, respectively). Those agency representatives will subsequently provide the Federal OSC with their response to the request (Section VI of Appendix 24, and Section IX of Appendix 25).

The Federal OSC may request that wildlife resource agencies direct wildlife protection actions of the responsible party--in consultation with the Federal OSC--to ensure that

appropriate wildlife protection activities are implemented in a timely manner. If necessary, wildlife resource agencies may recommend to the Federal OSC that responsible party efforts be either re-directed or assumed by appropriate wildlife resource agencies. Response actions assumed by federal and/or state wildlife resource agencies would be conducted as outlined above in Section 301.B.3.

#### 1. Wildlife Protection during Response Activities.

The information in Section 301.B.1. is applicable during a responsible party response. With respect to preventing disturbance to sensitive wildlife and habitats (such as nesting raptors, seabird rookeries, and marine mammal haulouts and pupping areas), and prevention of the collection of wildlife parts for personal use, appropriate wildlife resource agencies, through the Federal OSC, will request that the responsible party provide the agencies with information on what methods the responsible party has established to disseminate collection and disturbance prevention procedures to all private entities conducting response activities and to ensure that the procedures are followed.

The identification of appropriate deterrent strategies to prevent wildlife from contacting shoreline treatment chemicals must be developed in consultation with, and approved by, appropriate wildlife resource agencies. See "Fax Cover Sheet" in Appendix 24 for a list of wildlife resource agency contacts.

The responsible party must be familiar with the protection provisions contained in the Migratory Bird Treaty Act, the Bald Eagle Protection Act, the Marine Mammal Protection Act, and the Endangered Species Act. Under these and other authorities, private entities, such as a responsible party or their contractor(s), must be permitted by FWS and/or NMFS (as appropriate) to haze, capture, transport, rehabilitate, or otherwise take certain species. Parties responding to a spill who wish to initiate a wildlife hazing program must complete the checklist found in Appendix 24 and submit it to the Federal OSC.

#### 2. Prevention of Adverse Secondary Oil Effects.

The information in Section 301.B.2 is applicable during a responsible party response. Based on guidance provided by FWS and/or NMFS, the responsible party will be responsible for developing an incident-specific plan for retrieving dead oiled wildlife. The plan, which will be reviewed and approved by the appropriate wildlife resource agency(ies), will be implemented by the responsible party. ADF&G will assist FWS and/or NMFS on a case-by-case basis. Refer to Section 301.B.2 for additional information.

### 3. Establishing Wildlife Collection Programs and Treatment Facilities.

During a responsible party response, a decision to establish a capture and treatment program for oiled birds and/or marine and terrestrial mammals can only be made by the Federal OSC based on recommendations of representatives of appropriate wildlife resource agencies. The request by a responsible party to initiate a wildlife capture and treatment program must be submitted to the Federal OSC via the checklist contained in Appendix 25.

The responsible party will take the lead for the following:

- Obtaining necessary equipment and materials for wildlife collection, transportation, and treatment.
- Acquiring appropriate treatment facilities. Since spills may cover large areas, the establishment of more than one treatment facility may be more efficient and better for affected wildlife.
- Capturing oiled wildlife and transporting them to treatment facilities. This includes initiating (if necessary) contracts for this task with appropriate organizations and/or individuals. (Note FWS and NMFS responsibilities listed below.)
- Treating oiled wildlife. This includes initiating (if necessary) contracts for this task with appropriate organizations and/or individuals.
- Transporting treated wildlife to release sites or securing space in appropriate marine aquariums or zoos. (Note FWS and NMFS responsibilities listed below.)
- Preparing a spill-specific response plan.
- Ensuring that appropriate federal and state OSHA requirements are met.
- Organizing and using volunteers for appropriate assistance (see Section 302.B.4).
- Ensuring that people involved in the collection, handling, or transportation of wildlife have appropriate training.
- Ensuring that necessary permits are requested expeditiously.
- Fulfilling FWS and/or NMFS (as appropriate) data requests in a timely manner and providing routine updates.



- Ensuring that appropriate and accurate data are recorded regarding the numbers, condition, and location of all wildlife collected or observed by response personnel.
- Ensuring that necropsies are performed, when necessary, by federal and/or state pathologists or a pathologist approved by appropriate wildlife resource agencies, and that all results from necropsies are provided to appropriate wildlife resource agencies and treatment workers in a timely manner.
- Avoiding crowding of wildlife in holding facilities and/or placing incompatible species in the same holding facility, and ensuring that any animal causing problems is separated.
- Controlling and limiting public access to all wildlife facilities.
- Monitoring wildlife for disease, and isolating any animals showing signs of disease for examination by a qualified veterinarian and subsequent treatment or euthanasia, as appropriate.
- Ensuring that marine mammals are isolated from contact with other terrestrial mammals since diseases carried by terrestrial mammals could be transferred to marine mammals.
- Ensuring that any capture and/or treatment contractor(s): (1) have appropriate federal and state permits to collect, possess, treat, and band the affected wildlife; (2) demonstrate high standards of practice, treatment, conduct, and ethics; (3) have adequate liability insurance to protect both staff and volunteers; (4) have a proven record and experience in the rescue and treatment of the affected wildlife; and (5) comply with all applicable federal and state safety regulations to protect staff and volunteers.
- Transporting treated wildlife to release sites or securing space in appropriate marine aquariums and/or zoos.

FWS and/or NMFS (as appropriate) will be responsible for taking the lead on the following:

- Ensuring that necessary permits (with clauses regarding capturing, holding, cleaning, treating, euthanizing, and releasing wildlife) are issued expeditiously to appropriate individuals and/or organizations. (See Appendix 16 for a list of the species requiring permits and the permitting agencies.)
- Providing personnel and/or the names of specially trained personnel to the responsible party when marine or terrestrial mammals are involved.

- Providing an agency monitor at each treatment facility to ensure that wildlife are handled properly by contracted individuals or organizations.
- Ensuring that wildlife receive humane and appropriate treatment from their point of capture through their release to the wild or into marine aquariums or zoos.
- Approving releases to the natural habitat or transfers of wildlife to marine aquariums or zoos.
- Preparing a spill-specific release plan.

#### 4. Using Volunteers for Wildlife Protection Activities.

During a responsible party response, volunteers may be used to assist the responsible party in the administrative, wildlife collection, and treatment tasks identified in Section 301.B.4. Assigning volunteers with activities associated with wildlife-protection strategies, providing volunteers with information on tasks requiring assistance, managing volunteer work efforts, and ensuring that volunteers receive appropriate federal and state OSHA training are the responsibility of the responsible party.

#### 5. Funding.

During a responsible party response, federal and/or state resource agencies may request monies through the Federal OSC from the OSLTF to pay for incremental pre-approved costs of agency personnel who are either monitoring or directing responsible party actions. See Annex C, Appendix I, *Unified Plan, Volume I* for additional information on the use of the OSLTF.

400. Wildlife Protection Information.

401. Migratory Birds.

Information on the feasibility of applying various response strategies to migratory bird species is provided in Appendix 6. This information includes their relative sensitivity to oiling, their relative sensitivity to disturbance during critical periods of their life cycles, and general recommendations for minimizing adverse effects during an oil-spill response. A list of wildlife resource agency contacts is also provided, as well as citations for deterrent, capture, and treatment techniques.

402. Marine Mammals.

Information on the feasibility of various response strategies for each marine mammal species or group of species is provided in Appendix 7. This information includes population status, their relative sensitivity to oiling, their relative sensitivity to disturbance during critical periods of their life cycles, and general recommendations for minimizing adverse effects during an oil-spill response. In addition, a list of wildlife resource agency contacts is also provided, as well as citations for deterrent, capture, and treatment techniques.

403. Terrestrial Mammals.

Information on the feasibility of various response strategies for each terrestrial mammal species or group of species is provided in Appendix 8 in addition to a discussion of their relative sensitivity to oiling and disturbance, and general recommendations for minimizing adverse effects during an oil-spill response. A list of wildlife resource agency contacts is also provided, as well as citations for deterrent, capture, and treatment techniques.

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500. Equipment and Materials for Deterring Unoiled Wildlife and Capturing and Treating Oiled Wildlife

501. Migratory Birds.

Information on equipment and materials for deterring unoiled migratory birds and capturing and treating oiled migratory birds is located in Appendices 17, 18, and 19. Appendix 21 provides a list of entities in Alaska with equipment and materials stockpiled for deterring unoiled wildlife and capturing and treating oiled wildlife, including migratory birds.

502. Marine Mammals.

Information on equipment and materials needed for capturing and treating oiled sea otters is located in Appendix 20. Appendix 21 provides a list of entities in Alaska with equipment and materials stockpiled for deterring unoiled wildlife and capturing and treating oiled wildlife, including sea otters.

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600. Facilities for Treating Oiled Wildlife

601. Facility Requirements.

Facility requirements for treating oiled birds and sea otters are included in Appendices 22 and 23, respectively.

602. Facility Locations.

Appropriate locations for oiled wildlife treatment facilities will be identified through local community leaders following an oil spill. Potential facilities may include: armories, school buildings, community centers, or canneries.

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## APPENDIX 1

### FACTORS THAT MUST BE CONSIDERED WHEN DETERMINING WHEN TO BEGIN AND END A WILDLIFE CAPTURE AND TREATMENT PROGRAM

The following factors are not presented in any order of relative importance. Each factor must be considered and the resulting information must be documented by appropriate wildlife resource agencies and by the responsible party (during a responsible party response).

Appearance of species in Appendix 2 (Migratory Birds), Appendix 3 (Marine Mammals), or Appendix 4 (Terrestrial Mammals).

Response-team safety considerations.

Legal status of the species affected (e.g., special management concern, threatened, endangered).

Population status of the species affected (e.g., international, national, and regional significance).

Estimated percentage of the population affected.

Use of the species as a subsistence resource.

Logistical constraints in treating oiled animals (e.g., airports/runways and equipment availability).

Anticipated success in effectively treating oiled animals (i.e., expected survival rate of treated wildlife).

Public concern.

Projected cost of treatment program and funding availability.

Whether adequate treatment facilities exist; i.e., facilities must maintain wildlife in an environment that has low risk of disease.

Whether capture and treatment program and subsequent release poses any risk (due to disease, social disruption, or mortality) to wild animal populations.

Whether sufficient facilities exist for keeping wildlife in captivity that cannot be released back into the wild.

- Whether wildlife resource agencies are able to assume lead responsibility for all components of a wildlife capture and treatment program.

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## **APPENDIX 2**

### **SPECIES INCLUDED IN GUIDELINES BY SUBAREA: MIGRATORY BIRDS**

The major group to which each species belongs is indicated as follows: waterfowl (WF), seabird (SE), and other diving bird (DB), shorebird (SH), raptor (RA), and upland bird (UB). Also indicated are endangered species (ES), threatened species (TS), proposed threatened species (PTS), candidate species for listing (CS), and those of special management concern (SMC) to Alaska Department of Fish and Game (ADF&G). Species of SMC are generally defined as species established as a priority for study and management by public agencies to prevent their populations from declining to a level warranting a listing action under the Endangered Species Act.

The designation of migratory birds as "species of concern" for these Guidelines is generally based on the following criteria: 1) the population of the species in the planning area represents a significant proportion of the species' total world population; 2) the species, or species group, is known to be particularly vulnerable to impacts from an oil spill; 3) the species has been given a special status (i.e., ES or SMC) by state or federal agencies; or 4) the species is an important subsistence resource.

## APPENDIX 2, CONT.

### MIGRATORY BIRDS, CONT.

SPECIES OF CONCERN	SUBAREA									
	1 Southeast	2 Prince William Sound	3 Cook Inlet	4 Kodiak	5 Aleutian/ Pribilof Is	6 Bristol Bay	7 Western	8 Northwest Arctic	9 North Slope	10 Interior
Loons (DB)	P	P/S	P/S	P	P	P	P/S	P/S	P/S	P
Grebes (DB)	P	P	P	P	P	P	--	P/S	A	P
Trumpeter Swans (WF)(SMC)	U	P/S	P/S	A	A	A	A	R	--	P/S
Tundra Swans (WF)	P	P/S	P/S	P	P	P/S	P/S	P/S	P/S	P/S
Greater White-fronted Goose (WF)	U	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S
Snow Goose (WF)	U	P	P/S	P/S	P	P/S	P/S	P/S	P/S	P/S
Emperor Goose (WF)	A	U	U	P/S	P/S	P/S	P/S	P/S	R/S	P/S
Black Brant (WF)	U	P	P/S	P/S	P	P/S	P/S	P/S	P/S	A
Canada Geese (WF)	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S
Aleutian Canada Goose (WF) (TS)	--	--	--	--	P	--	--	--	--	--
Cackling Canada Goose (WF)	--	--	--	--	/S	/S	P/S	--	--	P/S
Dusky Canada Goose (WF)(SMC)	--	P	--	--	--	--	--	--	--	--
Oldsquaw (WF)	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S
Greater Scaup (WF)	P/S	P/S	P/S	P/S	P	P/S	P/S	P/S	U/S	P/S
Common Merganser (WF)	P	P/S	P/S	P	P	P	R	R	--	R
Red-breasted Merganser (WF)	P	P	P	P	P/S	P/S	P/S	P/S	R/S	R
Northern Pintail (WF)	P/S	P/S	P/S	P	P	P/S	P/S	P/S	P/S	P/S
Bufflehead (WF)	P/S	P/S	P/S	P	P/S	P/S	R/S	R/S	A	P/S
Goldeneye (WF)	P/S	P/S	P/S	P	P/S	P/S	U/S	U/S	A	P/S
Canvasback (WF)	U	U/S	U	R	R	R	R	R	A	P/S

## APPENDIX 2, CONT.

### MIGRATORY BIRDS, CONT.

SPECIES OF CONCERN	SUBAREA									
	<u>1</u> Southeast	<u>2</u> Prince William Sound	<u>3</u> Cook Inlet	<u>4</u> Kodiak	<u>5</u> Aleutian/ Pribilof Is	<u>6</u> Bristol Bay	<u>7</u> Western	<u>8</u> Northwest Arctic	<u>9</u> North Slope	<u>10</u> Interior
Northern Shoveler (WF)	U	P	P	R	R	R	U/S	U	R	P/S
Spectacled Eider (WF)(TS)	A	A	A	R	R	P	P	P	U/S	--
Steller's Eider (WF)(PTS)	R	R	P	P	P	P	U	U	U/S	--
King Eider (WF)	R	U	U	P	P/S	P	P	P/S	P/S	--
Common Eider (WF)	R	U	U	P	P/S	P/S	P/S	P/S	P/S	--
Harlequin Duck (WF)(SMC)	P/S	P/S	P/S	P/S	P/S	P/S	U/S	U/S	R	U
American Widgeon (WF)	P/S	P/S	P/S	P	P	P/S	P/S	P/S	U/S	P/S
Green-winged Teal (WF)	P/S	P/S	P/S	P	P/S	P/S	P/S	P/S	U/S	P/S
Scoter (WF)	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S	U/S	P/S
Mallard (WF)	P/S	P/S	P/S	P	P/S	P/S	P/S	P/S	R/S	P/S
Bald Eagles (RA)	P	P	P	P	P	P	R	R	A	P
Northern Goshawk (RA)(SMC)	U	U	U	U	U	U	R	R	--	P
Osprey (RA)(SMC)	R	R	R	R	R	R	R	R	A	R
American Peregrine Falcon (RA)(ES)	P	P	P	P	P	U	P	--	--	P
Arctic Peregrine Falcon (RA)	P	P	P	P	P	P	P	P	P	P
Peale's Peregrine Falcon (RA)(SMC)	P	P	P	P	P	--	--	--	--	--
Snowy Owl (RA)	R	U	U	U	U	U	U	U	U/S	R
Sandhill Crane (SH)	P/S	P/S	P/S	P	P	P/S	P/S	P/S	U/S	P/S
Wandering Tattler (SH)	U	P	P	U	U	U	U	U	A	U
Bristle-thighed Curlew (SH)(SMC)	A	A	A	R	R	R	U	U	R	A

## APPENDIX 2, CONT.

### MIGRATORY BIRDS, CONT.

SPECIES OF CONCERN	SUBAREA									
	1 Southeast	2 Prince William Sound	3 Cook Inlet	4 Kodiak	5 Aleutian/ Pribilof Is	6 Bristol Bay	7 Western	8 Northwest Arctic	9 North Slope	10 Interior
Eskimo Curlew (SH)(ES)	--	--	--	--	--	--	?	--	--	?
Oystercatcher (SH)	P	P/S	P	P	P/S	P/S	/S	--	--	--
American Golden Plover (SH)	U	P	P	P	P	P	P/S	P/S	P	P
Semipalmated Plover (SH)	P	P	P	P	P	P	P/S	P/S	U	P
Aleutian Tern (SE)	A	U	U	U	R	U	U	U	A	--
Arctic Tern (SE)	P/S	P/S	P	P	P	P	P/S	P/S	U	P
Gulls (SE)	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P
Murres (SE)	P	P	P	P	P/S	P	P/S	P/S	P/S	A
Guillemots (SE)	P	P	P	P	P	P	P	P	U	A
Murrelets (SE)	P	P	P	P	P/S	P/S	U/S	U	R	--
Marbled Murrelet (SE)(SMC)	P	P	P	U	U	U	A	A	--	--
Kittlitz's Murrelet (SE)(SMC)	U	P	P	U	U	U	U	U	R	--
Auklets (SE)	U	U	U	P	P/S	P	P/S	P/S	--	--
Puffins (SE)	U	P	P	P	P/S	P/S	P/S	P/S	R	--
Northern Fulmar (SE)	U	P	P	P	P	P	P	P	R	--
Red-legged Kittiwake (SE)(CS)	--	R	R	P	P/S	P	R	R	--	A
Black-legged Kittiwake (SE)	U/S	P	P	P	P/S	P	P/S	P/S	P	A
Cormorants (SE)	P	P/S	P	P	P/S	P	P/S	P/S	R	A
Short-tailed Albatross (SE)(CS)	A/O	A	A	A	A	A	A	A	--	--
Grouse (UB)	P	U/S	U/S	R	R	R/S	R/S	R/S	--	P/S
Ptarmigan (UB)	P	P/S	P/S	P	P	P/S	P/S	P/S	P/S	P/S

P = Present

U = Uncommon

R = Rare

A = Casual/Accidental

O = Pelagic (well offshore)

S = Subsistence Specie

## APPENDIX 3

### SPECIES INCLUDED IN GUIDELINES BY SUBAREA: MARINE MAMMALS

SPECIES	SUBAREA									
	<u>1</u> Southeast	<u>2</u> Prince William Sound	<u>3</u> Cook Inlet	<u>4</u> Kodiak	<u>5</u> Aleutian/ Pribilof Is	<u>6</u> Bristol Bay	<u>7</u> Western	<u>8</u> Northwest Arctic	<u>9</u> North Slope	<u>10</u> Interior
Sea Otter (FWS)	P/S	P/S	P/S	P/S	P/S	P/S	--	--	--	--
Polar Bear (FWS)	--	--	--	--	--	--	--	P/S	P/S	--
Northern Fur Seal (NMFS)	O	O	O	U – nearshore O	P/S	O - Gulf side	--	--	--	--
Northern Sea Lion (NMFS) (TS)	P/S	P/S	P/S	P/S	P/S	P/S	U/S	U/S	--	--
Ringed Seal (NMFS)	--	--	--	--	--	U	P/S	P/S	P/S	--
Harbor Seal (NMFS)	P/S	P/S	P/S	P/S	P/S	P/S	U/S	--	--	--
Spotted Seal (NMFS)	--	--	--	--	P/S	P/S	P/S	P/S	P/S	--
Bearded Seal (NMFS)	--	--	--	--	U/S	U (w/ice)/S	P/S	P/S	P/S	--
Pacific Walrus (FWS)	--	--	--	--	P/S	P/S	P/S	P/S	P/S	--
Ribbon Seal (NMFS)	--	--	--	--	O	--	O	P (pack ice)/S	P(pack ice)/S	--
Bowhead Whale (NMFS) (ES)	--	--	--	--	U	--	P	P/S	P/S	--
Gray Whale (NMFS)	P	P	P	P	P	P	P	P	P	--
Fin Whale (NMFS) (ES)	P	P	O (not in CI)	P	P	--	P	U	--	--
Humpback Whale (NMFS) (ES)	P	P	P	P	P	--	O	O	--	--
Minke Whale (NMFS)	P	P	P	P	P	P	P	P	U	--
Beluga Whale (NMFS)	--	--	P/S	--	--	P/S	P/S	P/S	P/S	--
Harbor Porpoise (NMFS)	P	P	P	P	P	P	P	P	P/S	--
Killer Whale (NMFS)	P	P	P	P	P	P	P	P	P	--
Dall's Porpoise (NMFS)	P	P	P	P	P	P	P	R (to 65°N)	--	--

# APPENDIX 3, CONT.

## MARINE MAMMALS, CONT.

SPECIES	SUBAREA									
	<u>1</u> Southeast	<u>2</u> Prince William Sound	<u>3</u> Cook Inlet	<u>4</u> Kodiak	<u>5</u> Aleutian/ Pribilof Is	<u>6</u> Bristol Bay	<u>7</u> Western	<u>8</u> Northwest Arctic	<u>9</u> North Slope	<u>10</u> Interior
Pacific White-Side Dolphin (NMFS)	P	O	O	(nearshore) O	U (nearshore) O	--	--	--	--	--
Blue Whale (NMFS) (ES)	O	O	O	O	P	--	U	U	--	--
Northern Right Whale (NMFS) (ES)	O/R	O/R	O/R	O/R	R	--	R	R	--	--
Sei Whale (NMFS) (ES)	O	O	O	P	P	--	--	--	--	--
Sperm Whale (NMFS) (ES)	O	O	O	O	P	--	P	O/R	--	--
Baird's Beaked Whale (NMFS)	O	O	O	O	P	--	--	--	--	--
Cuvier's Beaked Whale (NMFS)	O	O	O	O	P	--	--	--	--	--
Stejneger's Beaked Whale (NMFS)	O	O	O	O	P	--	--	--	--	--
California Sea Lion (NMFS)	U	R	--	--	--	--	--	--	--	--
Northern Elephant Seal (NMFS)	O	O	O	O	P (nearshore) O	--	--	--	--	--

P = Present

U = Uncommon

R = Rare

O = Pelagic (well offshore)

S = Subsistence Species



## APPENDIX 4

### SPECIES INCLUDED IN GUIDELINES BY SUBAREA: TERRESTRIAL MAMMALS

SPECIES	SUBAREA									
	<b>1</b> Southeast	<b>2</b> Prince William Sound	<b>3</b> Cook Inlet	<b>4</b> Kodiak	<b>5</b> Aleutian/ Pribilof Is	<b>6</b> Bristol Bay	<b>7</b> Western	<b>8</b> Northwest Arctic	<b>9</b> North Slope	<b>10</b> Interior
Brown Bear	P/S/SMC	P/S/SMC	P/S/SMC	P/SMC	P/S	P/S/SMC	P/S/SMC	P/S/SMC	P/S/SMC	P/S/SMC
Black Bear	P/S	P/S	P/S	--	--	P/S	P/S	P/S	P/S	P/S
Caribou/Reindeer	--	P/S	P/S	P	P/S	P/S	P/S	P/S	P/S	P/S
Moose	P	P/S	P/S	--	--	P/S	P/S	P/S	P/S	P/S
Muskoxen	--	--	--	--	--	--	P/S/SMC	P/SMC	P/SMC	--
Bison	--	P	--	--	--	--	P	--	--	--
Mountain Goat	P/S	P/S	P/S	P	--	--	--	--	--	--
Dall Sheep	--	P/S	P/S	--	--	P/S	P/S	P/S	P/S	P/S
Sitka Black-tailed deer	P/S	P/S	P/S	P/S	--	--	--	--	--	--
Wolf	P	P/S/SMC	P/S	P	P/S	P/S	P/S	P/S	P/S	P/S
Arctic Fox	--	--	--	--	P/S	P/S	P/S	P/S	P/S	--
Red Fox	P	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S
Aquatic Furbearers	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S	P/S

P = Present

S = Subsistence Species

SMC = Special Management Concern

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## **APPENDIX 5**

### **ALASKA REGIONAL RESPONSE TEAM WILDLIFE PROTECTION WORKING GROUP MEMBERS**

#### **State of Alaska**

Department of Fish and Game - Mark Fink

#### **Department of Commerce**

National Marine Fisheries Service - Brad Smith

Scientific Support Coordinator for Alaska - John Whitney

#### **Department of the Interior**

Fish and Wildlife Service - Catherine Berg

Office of Environmental Policy and Compliance - Pamela Bergmann (Chairperson)

#### **U.S. Coast Guard**

Seventeenth District - Larry Musarra

#### **Industry Representative**

ARCO Alaska, Inc. - Mike Joyce

#### **Environmental Representative**

Greenpeace, USA - Pam Miller

#### **Native Representative**

North Slope Borough - Tom Lohman

#### **Regional Citizens' Advisory Council Representative**

Prince William Sound Regional Citizens Advisory Council - A.J. Paul

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## **APPENDIX 6**

### **WILDLIFE PROTECTION INFORMATION: MIGRATORY BIRDS**

#### **GENERAL CONSIDERATIONS**

##### **BIRD SPECIES OF INTEREST**

There are approximately 167 species of marine birds in Alaska (7 loons and grebes, 60 seabirds, 60 shorebirds, and 35 species of waterfowl). No overall list of priorities can be made for protecting these species from oil spills. In many cases, priorities should be accorded to special types of habitat areas as identified under "Primary Response" below, rather than to species. In many cases, vulnerable species will be protected if special habitat areas are given priority. Nonetheless, the species listed in Appendix 2 should be given special consideration in the event that an oil spill affects them. Most of those species have small populations and a restricted geographic range. Since each of the species listed in Appendix 2 are very similar to one or more common species, expert assistance in identifying birds should be sought.

There are five groups of migratory birds included in the guidelines:

1. Seabirds (such as puffins, albatrosses, and gulls) -- found on the oceans from the coast to the high seas; most are on shore only during nesting season
2. Waterfowl (geese, swans, and ducks) -- use shorelines and bays
3. Shorebirds (such as sandpipers) - occupy tidal mudflats and rocks
4. Diving birds (such as loons and grebes) -- use nearshore waters
5. Raptors (such as bald eagles and peregrine falcons) - prey on marine and other birds and therefore may become oiled

Except for most seabirds, all of these birds also commonly occur inland during the breeding season.

Seabirds exhibit obvious immediate behavioral changes in response to exposure to oil. In particular, they begin preening to clean oil from their feathers. As a result, normal activities such as feeding, nesting, and migrating are abandoned. In addition, the ingestion of oil due to preening or skin contact may have long-term chronic effects on birds' metabolic processes. The severity of those effects will depend on factors including, but not limited to: the species contaminated, health of the birds prior to exposure, type of hydrocarbon, degree and length of exposure, and distribution of the hydrocarbon through the ecosystem.

## **APPENDIX 6, CONT.**

### **MIGRATORY BIRDS, CONT.**

#### **GENERAL CONSIDERATIONS, CONT.**

Most birds that contact oil die before they can be captured, due to toxic effects from ingested oil and/or hypothermia caused by injury to their plumage. Birds captured alive and taken to treatment centers can often be cleaned, and some can be rehabilitated and released. However, mortality following arrival at a treatment center may be high, due to the effects of oil or stresses associated with treatment and captivity. The proportion of birds brought to a treatment center that are eventually released can be expected to vary; of the birds released, only a portion can be expected to survive. Therefore, every effort should be made to prevent birds from becoming oiled.

To date, a wide variety of migratory birds have been affected by oil spills. The long-term implication of those effects are just beginning to be understood. Seabirds, such as murres and puffins, that have low reproductive rates may require decades to rebuild population levels to pre-spill numbers. Endangered species are particularly vulnerable to catastrophic losses.

Bird species exhibit different levels of susceptibility to oiling as shown below:

<u>Group to Oiling</u>	<u>Susceptibility</u>
Alcids (murres, puffins)	High
Ducks, geese and swans	High
Sea and bay ducks	High
Grebes	High
Loons	High
Cormorants	Medium
Gulls	Medium
Waders (herons, egrets, bitterns)	Medium
Cranes	Low
Plovers, sandpipers	Low
Songbirds	Low
Raptors	Low
Pelagic birds (albatross, petrels, fulmars)	Low

## **APPENDIX 6, CONT.**

### **MIGRATORY BIRDS, CONT.**

#### **GENERAL CONSIDERATIONS, CONT.**

Strategies for protecting migratory birds from oil include containing the oil before it reaches the birds, hazing them from oiled areas, and capturing and treating oiled birds. Capturing and treating oiled birds is the protection method of last resort. Although methods for cleaning birds are well established, only a small proportion of birds can be saved once their plumage has become oiled.

#### **RESPONSE STRATEGIES**

Primary Response. The primary response in protecting birds from an oil spill should be to prevent the oil from reaching areas where migratory birds are concentrated. This can be done using either booms and skimmers or, where environmental considerations permit, using chemical dispersants and/or *in situ* burning. Booms and skimmers and *in situ* burning are preferable near concentrations of birds because dispersants, being detergents, reduce the insulating value of their plumage and therefore may cause mortality to some birds. If possible, spraying dispersants directly into large concentrations of birds should be avoided. After dispersants have mixed with water, their danger to birds is reduced, although not eliminated. In addition, oiled debris--particularly contaminated food sources--should be removed from the environment as soon as possible to prevent scavenging by birds, which results in secondary effects due to the ingestion of oil.

Birds concentrate in various areas, depending on the species and season. If possible, the following types of areas where birds concentrate in the spring and fall should be protected following an oil spill:

Migration stopovers ("staging areas"). Some migratory birds form immense flocks during spring and fall migrations. Shorebirds and waterfowl gather at lagoons and estuaries to feed. Critical areas in the spring (in approximate order of priority) include: Copper River Delta, Izembek Lagoon, Kachemak Bay, parts of Cook Inlet and Prince William Sound, Bristol Bay estuaries, and the Stikine River Delta. Critical areas in the fall include: Izembek Lagoon, Bristol Bay estuaries, parts of the Yukon-Kuskokwim Delta and Cook Inlet, and lagoons of the Beaufort and Chukchi Sea coasts. In addition, migrating seabirds are concentrated at Unimak Pass during the spring and fall.

## **APPENDIX 6, CONT.**

### **MIGRATORY BIRDS, CONT.**

#### **RESPONSE STRATEGIES, CONT.**

Seabird colonies. Alaska seabirds nest in over 1,300 colonies in the spring and summer. The number of seabirds in these colonies ranges from a few dozen to several million birds. Birds are vulnerable to oil contamination when they are in large flocks on the water near the colony. Highest priority should be given to colonies containing rare species, the largest colonies in a region, and those with many species.

Major feeding areas of seabirds. Most seabirds obtain their food at sea away from land. While they may feed in areas that are close to land or more than 100 miles offshore, they are often concentrated in small areas. As a result, the presence of oil in some feeding areas could disable the majority of seabirds in the region. Feeding areas shift with the tides and seasons, so the position of large flocks fluttering over or sitting on the water should be carefully noted during reconnaissance flights and avoided, if possible, when applying dispersants.

Wintering areas of marine birds. These include the sheltered ice-free inlets of southern Alaska, especially around Kodiak Island, Prince William Sound, and southeastern Alaska; localized parts of the Aleutian Islands and Bering Sea; and the edge of the ice pack as well as open leads in the pack ice. Concentrations of birds vary during the winter; locations of large flocks should be recorded during reconnaissance flights and avoided, if possible, when applying dispersants.

In addition, other important coastal habitats such as marshes, estuaries, and lagoons are sensitive to oil contamination and should be protected even when no birds are present.

Secondary Response. The secondary response to protect birds from an oil spill is to deter them from a slick or a contaminated shoreline. A deterrent may be used to discourage birds from landing in or near an oil-contaminated area. Often the techniques require frightening birds to keep them away. In many cases, birds must be deterred from contaminated areas repeatedly and frequently.

The success of deterrent techniques may be low, and hazing may result in some bird mortality. Nonetheless, the drawbacks of hazing techniques are usually more acceptable than allowing bird populations to undergo oil contamination.



## **APPENDIX 6, CONT.**

### **MIGRATORY BIRDS, CONT.**

#### **RESPONSE STRATEGIES, CONT.**

The results of hazing are likely to be best in winter. Migrating birds may have a strong tendency to return to staging areas, even if those areas are contaminated. If hazing is effective, but alternate habitats are not available, some migrating birds may not survive due to lack of food or other environmental factors. Decisions are the most difficult when attempting to deter birds near a breeding colony away from oil. Oiled birds are usually unable to raise young successfully, and the death of adult birds is more of a threat to many seabird populations than the loss of young birds.

The devices and methods associated with wildlife deterrents can be grouped into the following general methods: visual, auditory, and combinations of visual and auditory. The choice of an appropriate method depends on the species involved, the surrounding environment, and the spill situation. In a practical sense, the choice may be based on what is available and the most logical approach to handling a specific situation. General guidelines for selecting bird deterrent methods are as follows:

- Where waterfowl, shorebirds, and raptors are dominant, use exploders to disperse birds, unless the birds are flightless. Flightless birds (young and molting birds) may need to be herded with boats and/or vehicles.

- Where diving birds are dominant, underwater sound (if effective) should probably be used. Some bird species (e.g., auklets) are attracted to lights while other species (e.g., loons and grebes) appear to be repelled.

The following is a general summary of deterrent methods, their effectiveness, and their limitations.

#### **Visual Methods**

Floating or Stationary Figures: A human effigy has been shown to be effective for deterring some birds during daylight.

Helium-Filled Balloons: Helium-filled balloons are sometimes successful in preventing birds from landing in fields and on water.

## **APPENDIX 6, CONT.**

### **MIGRATORY BIRDS, CONT.**

### **RESPONSE STRATEGIES, CONT.**

#### **Auditory Methods**

Propane Cannons and AV-Alarms: These devices have varying effectiveness (depending on the bird species) usually for only a relatively short period of time, i.e., two to three days. The devices may not be effective in rough, open water conditions.

Other Noisemakers: The playback of recorded sounds of alarmed birds has been shown to be effective, especially if done in conjunction with detonators. Shell crackers ignited from land and boats were used effectively in deterring birds away from two oil spills in the U.S., including the *M/V Swallow* in Dutch Harbor, Alaska in February 1989.

#### **Visual and Auditory Methods**

Herding or Hazing with Aircraft: This technique is generally not recommended because it is difficult to predict the response of birds, and may cause them to move into oiled areas. However, it may be appropriate for flying waterfowl or waterfowl on the ground that typically fly in response to disturbances. In some cases, helicopters have been effective in herding flightless birds (e.g., young or molting birds).

Herding with Boats: Herding with boats may be effective for flightless waterfowl, but is ineffective for diving birds. With several boats, birds can be herded into protected or boomed areas, which are not contaminated with oil.

#### **Other Methods**

Capture and Relocation: Small populations of endangered or critically-sensitive birds may be captured with cannon, rocket and/or drop nets, net guns, and/or swim or walk-in traps. Once captured, the birds should be rapidly transferred to "safe" areas away from the oil spill or to holding facilities at zoos or bird rehabilitators. It should be noted that this technique is very labor intensive and may not be practical in most cases.

Electromagnetic Current: There is some evidence that birds are sensitive to low-intensity, alternating-current electromagnetic fields during nocturnal flights. Further research may indicate how electrical currents can be used.

## **APPENDIX 6, CONT.**

### **MIGRATORY BIRDS, CONT.**

### **RESPONSE STRATEGIES, CONT.**

Any secondary response activities must have the approval of the appropriate wildlife resource agency and the Federal On-Scene Coordinator (OSC) via the checklist in Appendix 24.

Tertiary Response. The tertiary response to protect birds from an oil spill is to attempt to capture and treat oiled birds. This is the least preferred strategy, as explained above. Refer to Sections 301.B and 302.B for a description of agency and responsible party responsibilities in a bird capture and treatment program. Any tertiary response activities must have the approval of the appropriate wildlife resource agency and the Federal OSC via the checklist in Appendix 25.

<b>AGENCY CONTACTS: FWS</b>	<b>AGENCY CONTACTS: ADF&amp;G</b>
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

### **MANUALS: DETERRING, CAPTURING, TREATING**

Evaluation of Three Damage Abatement Techniques for Canada Geese. 1990. Wildlife Society Bulletin 18:405-410.

Sonic Deterrents in Animal Damage Control: A Review of Device Test and Effectiveness. 1990. Wildlife Society Bulletin 18:411-422.

Evaluation of Three Damage Abatement Techniques for Canada Geese. 1990. Wildlife Society Bulletin 18:405-410.

Tri-State Bird Rescue and Research, Inc. 1990. Oiled Bird Rehabilitation: A Guide for Establishing and Operating a Treatment Facility for Oiled Birds.

International Bird Rescue Research Center. 1990. Rehabilitating Oiled Sea Birds: A Field Manual with updates.

**APPENDIX 6, CONT.**

**MIGRATORY BIRDS, CONT.**

**MANUALS: DETERRING, CAPTURING, TREATING, CONT.**

American Petroleum Institute. 1986. Saving Oiled Sea Birds. Publication No. 4447.

American Petroleum Institute. 1985. Rehabilitating Oiled Sea Birds: A Field Manual.  
Publication No. 4407.

## **APPENDIX 7**

### **WILDLIFE PROTECTION INFORMATION: MARINE MAMMALS**

#### **GENERAL CONSIDERATIONS**

In contrast to a spill response for birds, the response to potentially affected marine mammals must recognize that capturing and cleaning oiled marine mammals generally will not be feasible. While procedures for dealing with oiled birds have been developed, no such procedures have been developed for marine mammals except sea otters and, to a more limited extent, polar bears.

It may be possible to adapt some of the procedures that have been developed for sea otters to other small species of marine mammals, such as smaller pinnipeds. However, one must also consider that such procedures involve capturing, treating, and releasing the animal, and that each of these steps places stress on the animal that may be a greater risk to its well being than contacting oil. Furthermore, the predictability of the animal's response is complicated by factors such as its age, sex, season, general health, and nutritional state.

The sensitivity of marine mammals to spilled oil is highly variable. It appears to be most directly related to the relative importance of fur and blubber to thermoregulation. Direct exposure to oil also can result in reversible conjunctivitis; ingestion of oil can result in digestive tract bleeding, and in liver and kidney damage. Ingestion of oil is of greater concern for species that groom themselves with their mouth, such as polar bears and sea otters. Inhalation of hydrocarbon volatiles can result in nerve damage and behavioral abnormalities.

#### **RESPONSE STRATEGIES**

The above considerations emphasize the importance of early response strategies that involve either removing the oil threat from the animal or its habitat or removing the animal from the threat. Accordingly, the following response strategies are listed in order of priority.

Primary Response. The primary response strategy for all marine mammals should emphasize controlling the release and spread of spilled oil at the source to prevent or reduce contamination of the species or its habitats. Priority should be placed on protecting pinniped-haulout and rookery beaches, particularly for those species that form male-harem bonds and strong territorial attachment to specific rookery sites (i.e., fur seals and northern sea lions). For those species, applying secondary or tertiary response strategies is probably not feasible during periods -- such as the breeding season -- when territorial bonding is strong. In addition, the primary response should also include removal of oiled carrion from the environment to prevent marine mammals, such as polar bears, from ingesting oil as they scavenge for food.

## **APPENDIX 7, CONT.**

### **MARINE MAMMALS, CONT.**

#### **RESPONSE STRATEGIES, CONT.**

Species of pinnipeds that do not form male-harem bonds often haul out in more protected, lower-energy shoreline areas, which could be more susceptible to oiling and less likely to be cleaned by natural forces. Areas where large numbers of these species are known to haul out should be protected from oiling, if possible. If oil does contact shorelines in important haul out areas, those shorelines should be afforded a high priority for cleaning with due regard to pupping and molting schedules.

All response activities should be conducted as far from marine mammals as possible to prevent disturbance, especially at pinniped-haulout and rookery beaches. Disturbance of haulout and rookery beaches can result in mass stampedes of the animals into the ocean, followed by abandonment of the beaches. This disturbance can result in severe effects, including direct physical injury to newborn, small, or weak animals; separation of mothers and pups; disturbance of established social hierarchies; and movement to less-favorable areas. The distance at which disturbance occurs is variable and depends on the level of response activities, local conditions of visibility, and the species in question.

Secondary Response. The secondary response strategy is to herd animals away from an oil spill site or away from a near-shore or beach area affected by oil. This is most feasible for pinnipeds at haulout and rookery areas during the period when territorial bonding is weakest (i.e., before pupping and after weaning). It also may be possible to deter polar bears when they are swimming.

A problem with deterrent techniques for marine mammals, particularly sea otters, is that they habituate very easily to noise or other distractions. Auditory or auditory and visual deterrent techniques have shown some limited success with marine mammals. Capturing and relocating marine mammals and herding them by scare sounds have proven to be the most effective methods. The primary factor to be considered before applying these techniques is the risk of the animal contacting oil. The danger of extreme shock and stress to an animal from being captured and relocated may far outweigh an animal's potential for being oiled. Use of any secondary response activities must have the approval of the appropriate wildlife resource agency and the Federal On-Scene Coordinator (OSC) via the checklist in Appendix 24.

## **APPENDIX 7, CONT.**

### **MARINE MAMMALS, CONT.**

#### **RESPONSE STRATEGIES, CONT.**

Tertiary Response. The tertiary response strategy is to attempt to capture and treat oiled animals. For most marine mammals, this would be hazardous and should be performed only by people with experience in capturing and handling the subject species. Any tertiary response activities must have the approval of the appropriate wildlife resource agency and the Federal OSC via the checklist in Appendix 25.

For species and groups of species discussed in this appendix, information is also provided on age classes that are most sensitive to oiling, special considerations relative to response procedures during a spill, and statements about the feasibility of the type of response that could be used.

## **APPENDIX 7, CONT.**

### **MARINE MAMMALS, CONT.**

#### **SEA OTTERS**

Of the marine mammals, the sea otter is the most sensitive to the effects of oiling. This fact--plus its relatively small size and its listing as "threatened" in California under the Endangered Species Act--has resulted in the development of techniques for capturing, and treating oiled sea otters. While sea otters in Alaska are not "threatened," they are protected under the Marine Mammal Protection Act. The number of sea otters in Alaska is currently estimated at 100,000 to 120,000.

The sea otter is considered to be equally vulnerable to spilled oil during all stages of its life cycle. Following an oil spill, sea otters are susceptible to a number of deleterious physiological effects. Because sea otters do not have layers of blubber, they rely on their fur for insulation. As a result, oiling of more than a small portion of their fur may result in rapid death from hypothermia. If oil contamination of the fur is not severe enough to cause death from hypothermia, sea otters will spend a great deal of time grooming in an attempt to remove the oil and maintain their fur. Sea otters have high metabolic requirements and the additional time spent grooming may increase metabolic needs, thereby reducing foraging time and leading to a lowered metabolic efficiency. If unresolved, this condition will result in starvation and death. Ingestion of hydrocarbons during the grooming process or through feeding on contaminated prey items may result in digestive-tract irritation, neurological effects and physiological changes, which in turn, may lead to organ injury, dysfunction, and death. Aromatic hydrocarbons are capable of causing inhalation injury and may cause death before either hypothermia or ingestion injuries affect the animals.

#### **RESPONSE STRATEGIES**

Primary Response. Because of their sensitivity to oiling and stress, primary response strategies should be emphasized for sea otters.

Secondary Response. This response may be feasible; however, deterring techniques have not been very successful because sea otters appear to habituate very easily to noise and other distractions associated with human activity.

Use of any secondary response activities must have the approval of Fish and Wildlife Service (FWS) and the Federal OSC via the checklist in Appendix 24.

The following is a general summary of deterrent methods, their effectiveness, and their limitations:



## **APPENDIX 7, CONT.**

### **SEA OTTERS, CONT.**

### **RESPONSE STRATEGIES, CONT.**

#### **Visual Methods**

There are no data indicating that visual methods are effective for keeping sea otters away from selected sites.

#### **Auditory Methods**

Use of propane cannons and other firearms, seismic exploders, and killer whale sounds have provided only limited success for deterring sea otters. Sea otters habituate readily to noise and other distractions associated with human activity making auditory methods useful only for short-term deterrence.

#### **Other Methods**

Herding sea otters with boats and aircraft has not been successful.

Pre-emptive capture and relocation of sea otters may be feasible if only a small number are in danger of being oiled. The potential for sea otters to be oiled should be high before this technique is initiated.

Tertiary Response. This response may be feasible under certain conditions and was initiated in Prince William Sound and the Gulf of Alaska following the March 24, 1989, *T/V Exxon Valdez* oil spill. Sea otter capture and treatment techniques used during the *T/V Exxon Valdez* oil spill response are described in two reports prepared by R.W. Davis and T.M. Williams, which are listed in this appendix under "Manuals: Deterrents, Capturing, Cleaning, and Treating". Any tertiary response activities must have the approval of FWS and the Federal OSC via the checklist in Appendix 25.

**APPENDIX 7, CONT.**

**SEA OTTERS, CONT.**

**RESPONSE STRATEGIES, CONT.**

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## **APPENDIX 7, CONT.**

### **SEA OTTERS, CONT.**

#### **MANUALS: DETERRENTS, CAPTURING, CLEANING, TREATING**

Bayha and Kormendy. 1990. Sea Otter Symposium: Proceedings of a Symposium to Evaluate the Response Effort on Behalf of Sea Otters after the T/V *Exxon Valdez* Oil Spill into Prince William Sound, Anchorage, Alaska, 17-19 April 1990.

Davis, R.D., T.M. Williams, J.A. Thomas, R.A. Kastelein. 1988. The Effects of Oil Contamination and Cleaning on Sea Otter (*Enhydra lutris*). II. Metabolism, Thermoregulation, and Behavior. Canadian Journal of Zoology 66:2782-2790.

Davis, R.D., T.W. Williams, F. Awbrey. 1988. Sea Otter Oil Spill Avoidance Study. Minerals Management Service Report, MMS-88-0051.

Davis, R.W. 1990. Advances in Rehabilitating Oiled Sea Otters: The Valdez Experience. International Wildlife Research.

Hubbs Marine Research Institute. 1986. Sea Otter Oil Spill Mitigation Study. Pacific OCS Region. Minerals Management Service. U.S. Department of the Interior. Contract No. 14-12-001-30157.

Mate, B., and B. Harvey. Acoustic Deterrents for Marine Mammals, Oregon Sea Grant Report ORESU-W-86-001.

Williams, T.M., R.A. Kastelein, R.W. Davis, and J.A. Thomas. 1988. The Effects of Oil Contamination and Cleaning on Sea Otters (*Enhydra lutris*). I. Thermoregulatory Implications based on Pelt Studies. Canadian Journal of Zoology 66:2778-2781.

Williams, T.M. and R.W. Davis (eds.). 1990. Sea Otter Rehabilitation Program: 1989 Exxon Valdez Oil Spill. International Wildlife Research.

Williams, T.M. 1990. Evaluation the Long Term Effects of Crude Oil Exposure in Sea Otters: Laboratory and Field Observations. International Wildlife Research.

Williams, T.M., and R.W. Davis (eds). 1995. Emergency Care and Rehabilitation of Oiled Sea Otters: A Guide for Oil Spills Involving Fur-Bearing Marine Mammals. University of Alaska Press.

## **APPENDIX 7, CONT.**

### **PINNIPEDS**

#### **GENERAL CONSIDERATIONS**

In general, attempting to capture and treat oiled pinnipeds is not recommended. However, in situations involving heavily oiled juvenile seals, capture and treatment could be attempted if death of the animal appears certain without intervention. While cleaning shorelines or beaches of pinniped rookeries is not recommended during the pupping and breeding seasons, cleaning of heavily oiled haulout beaches may be conducted following receipt of approval by the Federal OCS (after consultation with appropriate federal and state wildlife resource agencies).

The following is a list of pinniped species that are discussed in the remainder of this appendix:

- Northern fur seals
- Northern (Steller) sea lions
- Ringed seals
- Harbor seals
- Spotted seals
- Bearded seals
- Ribbon seals
- Pacific walruses
- Northern elephant seals

Northern elephant seals are reported only occasionally in Alaskan waters during the summer, primarily from southeast Alaska to Prince William Sound. No northern elephant seal breeding occurs in Alaska. Therefore, because of its limited presence in Alaska and the very low probability of the species being threatened by oil spills in Alaskan waters, northern elephant seals are not discussed in the following sections.

## **APPENDIX 7, CONT.**

### **NORTHERN FUR SEALS**

#### **GENERAL CONSIDERATIONS**

The population of the northern fur seal is declining. Effective June 17, 1988, northern fur seals were declared as depleted under the provisions of the Marine Mammal Protection Act. These seals have fur for insulation and only relatively thin blubber layers. Oiled fur could result in the loss of insulation. As a result, this species is the most sensitive to oiling of all of the pinnipeds. While fur seals do not groom with their mouths, they nibble their pelage with their teeth and may ingest oil while grooming. It is also possible that juvenile northern fur seals may ingest oil while nursing.

The greatest risk to northern fur seals is when they are on the Pribilof Islands' breeding rookeries during June, July, and August. At that time, approximately 80 percent of the world's northern fur seal population breeds and pups on the Pribilof Islands. Except for the breeding period, the northern fur seal remains at sea, feeding on mid-water fish and squid. During an oil spill, pups would be the most sensitive to the effects of oiling; adults would be the most difficult to handle.

#### **RESPONSE STRATEGIES**

Primary Response. Primary response strategies should be emphasized for this species, since both secondary and tertiary responses are not feasible during most of the period when the animals are present on breeding rookeries.

Secondary Response. Capturing and relocation may be feasible if only a small number of fur seals are in danger of being oiled. However, the potential for northern fur seals to be oiled should be high before this technique is used. Deterring them with predator or companion sounds may be effective.

Driving northern fur seals away from an oiled beach would be feasible only for nonterritorial, nonbreeding juvenile males (i.e., 3-to-4-year old animals may be driven from one beach area to another or they may be driven from a low beach area to higher ground and held for a period of time); and all animals before the breeding season begins (i.e., before mid-May) or after the breeding season ends (i.e., after mid-September).

No attempts should be made to drive breeding bulls, breeding females, and/or nursing pups during mid-May through mid-September. Territorial bulls cannot be driven during this time, and their belligerent behavior could result in great risk to individuals trying to drive them. In addition, disturbance of rookeries during this period may result in pup mortality due to pup abandonment .

## **APPENDIX 7, CONT.**

### **NORTHERN FUR SEALS, CONT.**

#### **RESPONSE STRATEGIES, CONT.**

and trampling. Use of any secondary response activities must have the approval of National Fisheries Services (NMFS) and the Federal OSC via the checklist in Appendix 24.

Tertiary Response. Capturing and cleaning oiled northern fur seals is generally not feasible. The females spend part of the time nursing their young on the rookery and approximately one week at a time feeding at sea. This behavior increases their chance of contacting oil, particularly if it is near a rookery. Pups are most vulnerable to oiling when returning females transfer oil they have picked up to their young or when oil is washed onto rookery beaches. Since females nurse only their own pup, a cleaned pup would have to be returned to the rookery for its mother to find, which could expose the pup to reoiling. Capturing and treating oiled pups is not recommended because of the danger to personnel from territorial bulls and problems associated with separating a pup from its mother. Furthermore, oiled adult northern fur seals would be extremely dangerous to handle even if they were partially debilitated. Any capture or treatment of individual fur seals must be authorized by NMFS.

<b>AGENCY CONTACTS: NMFS</b>	<b>AGENCY CONTACTS: ADF&amp;G</b>
Brad Smith 271-5006 (wk) 248-4211 (hm) 271-3030 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Kaja Brix 586-7235 (wk) 586-1637 (hm) 586-7012 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## **APPENDIX 7, CONT.**

### **NORTHERN (STELLER) SEA LIONS**

#### **GENERAL CONSIDERATIONS**

Although the northern sea lion population appears to be relatively stable in southeast Alaska (which contains 14% of the world's total northern sea lion population), the number of these animals in the Bering Sea and west-central Gulf of Alaska (which contains 56% of the world's northern sea lion population) is declining. As a result of this decline, the northern sea lion was declared threatened on November 26, 1990, under the Endangered Species Act.

Like fur seals, northern sea lions are easily disturbed at haulout areas and rookeries. Unlike the fur seal, however, adult northern sea lions have a thick blubber layer for insulation. In addition, the absence of grooming behavior lessens the chance of ingesting oil. Northern sea lion pups (which are generally weaned one year after birth) have less subcutaneous fat than adults and are probably much more sensitive to the effects of oiling. The greatest risk of oiling is to females who spend part of their time nursing their young on the rookery and part of their time feeding at sea during the pupping and breeding season.

#### **RESPONSE STRATEGIES**

Primary Response. Primary response strategies should be emphasized for northern sea lions, since both secondary and tertiary responses on rookeries are not feasible during the breeding period. In addition, most sea lions are produced at a few very large rookeries. For example, in the Gulf of Alaska, 99 percent of the animals are produced in 10 rookeries. This emphasizes the need to protect these critical areas.

Secondary Response. Driving northern sea lions away from an oil spill or an affected haul out beach would be feasible only before the breeding season begins (i.e., before May) or after the breeding season ends (i.e., after August). Although females give birth between mid-May through mid-July, most pups are born in June. During May through August, territorial breeding behavior is occurring on rookeries. Territorial bulls cannot be driven during this time, and their belligerent behavior could result in great risk to individuals trying to drive them. In addition, disturbance of rookeries during this period may result in pup mortality due to pup abandonment and trampling. Therefore, it is inadvisable to disturb northern sea lions and inadvisable to disturb rookeries during May through August. Use of any secondary response activities must have the approval of NMFS and the Federal OSC via the checklist in Appendix 24.

## **APPENDIX 7, CONT.**

### **NORTHERN (STELLER) SEA LIONS, CONT.**

#### **RESPONSE STRATEGIES, CONT.**

Tertiary Response. Capturing and treating oiled northern sea lions is generally not feasible and not recommended. Problems with this response for northern sea lions are similar to those for northern fur seals. The greatest risk of oiling is to females who spend part of the time nursing their young on the rookery and part of their time feeding at sea. Pups are most vulnerable to oiling when returning females contaminate their young or when oil is washed onto rookery beaches. Since females nurse only their own pup, a cleaned pup would have to be returned to the rookery for its mother to find, which could expose the pup to reoiling. In general, capturing and cleaning oiled pups is not recommended because of danger to personnel from territorial bulls and the problems associated with separating of a pup from its mother. Furthermore, attempting to capture and treat an adult sea lion is generally not feasible because of the potential danger to personnel posed by the northern sea lion's large size. Any capture or treatment of individual sea lions must be authorized by NMFS.

<b>AGENCY CONTACTS: NMFS</b>	<b>AGENCY CONTACTS: ADF&amp;G</b>
Brad Smith 271-5006 (wk) 248-4211 (hm) 271-3030 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Kaja Brix 586-7235 (wk) 586-1637 (hm) 586-7012 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)



## **APPENDIX 7, CONT.**

### **RINGED SEALS**

#### **GENERAL CONSIDERATIONS**

Alaska's population of ringed seals is relatively stable. These animals have thick blubber layers for insulation and no grooming behavior, which lessens the chance of ingesting oil. However, preweaned pups probably are much more sensitive to the effects of oiling because they rely primarily on lanugo (i.e., a thick layer of white hair) for insulation and have little or no blubber layer at birth. Therefore, oiling of lanugo could result in the loss of insulation, which could be fatal to preweaned pups. March to June is the critical period for pups -- they are born in March and April and are weaned by June. By the time the pups are weaned, they have a well-developed blubber layer for insulation.

Ringed seals do not establish breeding rookeries, and males do not form harems. Rather, pups are born and reared in ice lairs constructed by their mothers. These lairs are scattered over the shorefast ice, minimizing the threat of a single oil spill to large proportions of the ringed seal population. During the breeding season, breeding adults dominate the shorefast-ice zone; nonbreeding subadults dominate the flaw zone; and all ages of ringed seals occur in the pack ice.

The most immediate threat to ringed seals would be direct oil contamination of ice lairs and preweaned pups, or indirect oil contamination resulting from the transport of oil into lairs by adults. The amount of damage could be determined only by locating and opening lairs. It is possible to locate ringed seals lairs through the use of specially-trained dogs.

#### **RESPONSE STRATEGIES**

Primary Response. Primary response strategies are emphasized for ringed seals. During the most sensitive period (i.e., the breeding period), the application of secondary and tertiary response techniques would be the most difficult. The process of locating and estimating any oil-related effects on ice lairs would be slow and labor intensive.

Secondary Response. This response would be feasible only during ice-free periods, when animals are using ice floes for hauling out. It probably is not possible to catch ringed seals on ice floes, and if chased into the water, it would likely result in negative rather than positive effects. Use of any secondary response activities must have the approval of NMFS and the Federal OSC via the checklist in Appendix 24.

## **APPENDIX 7, CONT.**

### **RINGED SEALS, CONT.**

### **RESPONSE STRATEGIES, CONT.**

Tertiary Response. Attempting to capture and treat oiled preweaned ringed seals is not feasible. After cleaning, pups would have to be returned to the oiled ice lair so their mothers could provide

nourishment; mothers might abandon disturbed lairs, or they might recontaminate the pups with oil. Attempting to capture and treat postweaned ringed seal pups would be more feasible. Any capture or treatment of individual ringed seals must be authorized by NMFS.

<b>AGENCY CONTACTS: NMFS</b>	<b>AGENCY CONTACTS: ADF&amp;G</b>
Brad Smith 271-5006 (wk) 248-4211 (hm) 271-3030 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Kaja Brix 586-7235 (wk) 586-1637 (hm) 586-7012 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## **APPENDIX 7, CONT.**

### **HARBOR SEALS**

#### **GENERAL CONSIDERATIONS**

In some areas of Alaska, harbor seals, like northern sea lions and northern fur seals, are declining in numbers. Harbor seals are closely associated with coastal waters; and their movements are considered to be localized, except in the Copper River Delta and Bristol Bay areas where large-scale harbor seal movements appear to occur.

Harbor seals have a thick blubber layer for insulation and no grooming behavior, which lessens their chance of ingesting oil. However, preweaned pups are probably much more sensitive to the effects of oiling because they rely primarily on a fur coat for insulation and also because oiling could result in a pup's loss of insulation. Pups have little or no blubber layer at birth.

Harbor seals do not exhibit the bull-harem territorial behavior characteristic of fur seals and sea lions. Furthermore, pup production does not appear to be restricted to a few major rookeries, as is the case for sea lions.

Hauled-out harbor seals are easily disturbed. Adults and pups haul out on tidal rocks and lower portions of beaches near the water's edge, thus making them particularly likely to contact oil that comes ashore after a spill. Adult females readily enter the water when disturbed, leaving pups on the shore. Oil-cleanup crews should not pick up what appear to be abandoned pups because females probably will return; however, prolonged cleanup in harbor seal rookeries may result in permanent pup abandonment by females.

#### **RESPONSE STRATEGIES**

Primary Response. Primary response strategies should be emphasized for harbor seals.

Secondary Response. This response is feasible for swimming harbor seals and known harbor seal-haulout and rookery-beach areas. The presence of cleanup crews on oiled beaches may keep animals away from affected areas. In areas of oiled beaches frequented by hauled-out harbor seals, it may be feasible to use noisemaking devices (such as propane cannons) to keep animals away until cleanup is begun.

Deterring with predator or companion sounds may be effective. Use of any secondary response activities must have the approval of NMFS and the Federal OSC via the checklist in Appendix 24.

## **APPENDIX 7, CONT.**

### **HARBOR SEALS, CONT.**

### **RESPONSE STRATEGIES, CONT.**

Tertiary Response. Attempting to capture and clean harbor seals is feasible only for oiled, moribund pups. If an animal, regardless of age, takes to the water when approached, it should be left alone. If the harbor seal is moribund and does not try to escape when approached, it would be feasible to pick up the animal and attempt to treat it. Any capture or treatment of individual harbor seals must be authorized by NMFS.

<b>AGENCY CONTACTS: NMFS</b>	<b>AGENCY CONTACTS: ADF&amp;G</b>
Brad Smith 271-5006 (wk) 248-4211 (hm) 271-3030 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Kaja Brix 586-7235 (wk) 586-1637 (hm) 586-7012 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## **APPENDIX 7, CONT.**

### **SPOTTED SEALS**

#### **GENERAL CONSIDERATIONS**

Alaska's population of spotted seals is thought to be relatively stable. Spotted seals have a thick blubber layer for insulation and no grooming behavior, which lessens their chance of ingesting oil. Preweaned pups probably are the most sensitive to the effects of oiling because they rely primarily on hair for insulation and have little blubber and also because oiled hair could result in the loss of a pup's insulation. The most critical period for this species is when pupping begins in April and until weaning ends in June.

Spotted seals are similar in appearance and behavior to harbor seals, hauling out on ice floes in the spring and early summer and coastal beaches during ice-free months. During this time, response techniques that apply to ringed and harbor seals also should apply to spotted seals.

During ice-free months, spotted seals are widely distributed in coastal waters. During winter and spring, spotted seals are associated with the southern ice front of the Bering Sea; they are excluded from shorefast ice. Beginning in April, sea-ice floes are used for pupping. Male-female, male-female-pup, and female-pup groups usually are distributed over ice floes. While nonbreeding animals usually are clumped into large groups, these groups of spotted seals typically are spread over relatively large areas.

#### **RESPONSE STRATEGIES**

Primary Response. Primary response strategies should be emphasized for spotted seals.

Secondary Response. During ice-free periods, spotted seals move into coastal haulout areas. The presence of cleanup crews on oiled beaches may keep animals away from affected areas. In areas of oiled beaches frequented by hauled-out spotted seals, it may be feasible to use noisemaking devices (such as propane cannons) to keep animals away until cleanup is begun. Using deterrents during ice seasons may or may not be feasible depending on logistical access to the ice front.

Deterring with predator or companion sounds may be effective. Use of any secondary response activities must have the approval of NMFS and the Federal OSC via the checklist in Appendix 24.

Tertiary Response. Assuming that they can be reached, attempting to capture and treat spotted seals is feasible only for oiled, moribund pups. If an animal, regardless of its age, takes to the water when approached, it should be left alone. If the spotted seal is moribund and does not try to escape when approached, it may be feasible to pick up the animal and attempt to treat it. Any capture or treatment of individual spotted seals must be authorized by NMFS.

**APPENDIX 7, CONT.**

**SPOTTED SEALS, CONT.**

**RESPONSE STRATEGIES, CONT.**

AGENCY CONTACTS: NMFS	AGENCY CONTACTS: ADF&G
Brad Smith 271-5006 (wk) 248-4211 (hm) 271-3030 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Kaja Brix 586-7235 (wk) 586-1637 (hm) 586-7012 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## **APPENDIX 7, CONT.**

### **BEARDED SEALS**

#### **GENERAL CONSIDERATIONS**

Alaska's population of bearded seals is thought to be relatively stable. Bearded seals have thick blubber layers for insulation and no grooming behavior, which lessens their chance of ingesting oil. Preweaned pups probably are much more sensitive to the effects of oiling because they rely primarily on hair for insulation and have little blubber and also because oiled hair could result in the loss of a pup's insulation.

Unlike most Alaskan pinnipeds, bearded seals are bottom feeders. Thus, their distribution is limited to shallow areas, approximately 200 meters in depth. Bearded seals are closely associated with ice; their seasonal movements are directly related to the advance and retreat of sea ice. Like the spotted seal, bearded seals do not occur in landfast shore ice. During winter and spring, most bearded seals are located in the central and northern Bering Sea. As the ice retreats in mid-April through June, bearded seals move into the Chukchi and Beaufort Seas. During the summer, most are found near the wide, fragmented margin of multiyear ice. Single animals or small groups of immature individuals can be found entering bays and rivers in the fall.

Most bearded seal pups are born on ice floes in the Bering Sea from mid-March through early May, with peak pupping occurring during the last one-third of April. Bearded seal pups are most vulnerable to the effects of oiling from mid-March through June. They exhibit rapid blubber accumulation, however, and the nursing period for each individual is 12 to 18 days.

#### **RESPONSE STRATEGIES**

Primary Response. Primary response strategies should be emphasized for bearded seals.

Secondary Response. The use of deterrents may or may not be feasible depending on logistical access to the ice front.

Deterring with predator or companion sounds may be effective. Use of any secondary response activities must have the approval of NMFS and the Federal OSC via the checklist in Appendix 24.

Tertiary Response. Assuming that they can be reached, capturing and treating bearded seals is feasible only for oiled, moribund pups. The bearded seal pup is one of the largest phocid pinnipeds in Alaska, attempting to capture and treat an adult bearded seal is generally not feasible because of the potential danger to personnel posed by the bearded seal's large size. If an animal, regardless of age, moves into the water when approached, it should be left alone. If the bearded seal is moribund and does not try to escape when approached, it would be feasible to pick up the

**APPENDIX 7, CONT.**

**BEARDED SEALS, CONT.**

**RESPONSE STRATEGIES, CONT.**

animal and attempt to treat it. Any capture or treatment of individual bearded seals must be authorized by NMFS.

<b>AGENCY CONTACTS: NMFS</b>	<b>AGENCY CONTACTS: ADF&amp;G</b>
Brad Smith 271-5006 (wk) 248-4211 (hm) 271-3030 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Kaja Brix 586-7235 (wk) 586-1637 (hm) 586-7012 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)



## **APPENDIX 7, CONT.**

### **RIBBON SEALS**

#### **GENERAL CONSIDERATIONS**

The population status of ribbon seals is unknown. Ribbon seals are a pelagic species, have thick blubber layers for insulation and no grooming behavior, which lessens their chance of ingesting oil. Preweaned pups probably are much more sensitive to the effects of oiling because they rely primarily on hair for insulation and have little blubber, and also because oiled hair could result in the loss of a pup's insulation.

Ribbon seals are associated with the Bering Sea ice front during the winter and spring. Individual ribbon seals, which are distributed in local concentrations on rather large, thick, ice floes, are most common approximately 10 to 60 kilometers north of the ice fringe. Unlike bearded seals, individual ribbon seals do not follow the ice front when it retreats northward; they remain widely distributed offshore during the summer in the Bering, Chukchi, and Beaufort Seas.

Ribbon seals do not haul out on land; they use ice floes for haulout and pupping areas. However, due to the scattered distribution of ribbon seals, an oil-spill threat to a large proportion of the population is rather remote. The pupping period, when ribbon seals are most vulnerable, is April through early June. The period between birth and weaning is approximately three to six weeks.

#### **RESPONSE STRATEGIES**

Primary Response. Primary response strategies should be emphasized for ribbon seals.

Secondary Response. The use of deterrents may or may not be feasible depending upon logistical access to ice fronts.

Deterring with predator or companion sounds may be effective. Use of any secondary response activities must have the approval of NMFS and the Federal OSC via the checklist in Appendix 24.

Tertiary Response. Assuming that they can be reached, capturing and cleaning ribbon seals is feasible only for oiled, moribund pups. If an animal, regardless of age, takes to the water when approached, it should be left alone. If a ribbon seal pup is moribund and does not try to escape when approached, it may be feasible to pick up the animal and attempt to treat it. Any capture or treatment of individual ribbon seals must be authorized by NMFS.

**APPENDIX 7, CONT.**

**RIBBON SEALS, CONT.**

**RESPONSE STRATEGIES, CONT.**

<b>AGENCY CONTACTS: NMFS</b>	<b>AGENCY CONTACTS: ADF&amp;G</b>
Brad Smith 271-5006 (wk) 248-4211 (hm) 271-3030 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Kaja Brix 586-7235 (wk) 586-1637 (hm) 586-7012 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## **APPENDIX 7, CONT.**

### **PACIFIC WALRUSES**

#### **GENERAL CONSIDERATIONS**

Walruses are nearly circumpolar with the Pacific walrus inhabiting the shelf waters of the Bering and Chukchi seas and extending into the eastern East Siberian and western Beaufort Seas. Alaska's population of Pacific walruses has increased steadily from the 1950's through the 1970's to near historic population levels. Surveys of the Pacific walrus population since the mid-1970's indicate that the population level is relatively steady or is decreasing slightly (i.e., 221,360 in 1975; 246,140 in 1980; and 201,039 in 1990).

In January, February and March, Pacific walruses are usually found in two areas, southwest of St. Lawrence Island and in outer Bristol Bay. From late March until December/January, walruses move north, then south, following ice reduction and growth. Walruses spend about one-third of their time hauled out on ice (which they prefer) and land. Walruses are very gregarious and occur as small groups at sea or haul out in groups up to several thousand. Like fur seals and sea lions, Pacific walruses are extremely susceptible to disturbance at haulout areas. Stampeding may result in the injury or death by trampling of the pups and, to a lesser extent, juveniles and adults.

These animals have thick skin and blubber layers for insulation and no grooming behavior, which lessens their chance of ingesting oil. However, nursing pups will be at risk due to ingestion of oil from contaminated teats. Adult walruses thermoregulation abilities are probably not affected by direct contact with oil, since heat loss is regulated by control of peripheral blood flow through the animal's skin and blubber. There is evidence that short-term oil-induced irritation to the eyes (i.e., conjunctivitis) is reversible.

There may be long-term chronic effects as a result of migration through oil contaminated waters or as a result of hauling out onto oil contaminated land and ice, and there may be the possibility of consuming contaminated prey items. Adult walruses may not be severely affected by the oil spill through direct contact but they are extremely sensitive to any habitat disturbance by response activities.

#### **RESPONSE STRATEGIES:**

Primary Response. Primary response strategies should be emphasized for Pacific walrus.

Secondary Response. Herding animals away from an oil spill site may be feasible for Pacific walruses already in the water. However, hauled-out animals should be left alone due to the risk of trampling if stampeding occurs. Use of any secondary response activities must have the approval of FWS and the Federal OSC via the checklist in Appendix 24.

## **APPENDIX 7, CONT.**

### **PACIFIC WALRUSES, CONT.**

#### **RESPONSE STRATEGIES, CONT.**

The following is a general summary of deterrent methods, their effectiveness, and their limitation.

##### **Visual Methods**

There are no data indicating that visual methods are effective in keeping walruses away from a specific site.

##### **Auditory Methods**

The use of propane cannons and other firearms may be effective for short-term deterrence of walruses that are already in the water; however, this method should not be used in the vicinity of haulout sites.

##### **Other Methods**

Herding walruses with vehicles, boats, or aircraft has not been demonstrated to be successful.

Tertiary Response. Attempting to capture and treat Pacific walruses generally is not feasible because of their sensitivity to disturbance and the potential danger to personnel posed by the walruses large size and belligerent behavior. Any capture or treatment of individual walruses must be authorized by FWS.

<b>AGENCY CONTACTS: FWS</b>	<b>AGENCY CONTACTS: ADF&amp;G</b>
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## **APPENDIX 7, CONT.**

### **PINNIPED MANUALS: DETERRING, CAPTURING, AND TREATING**

Chen-Valet, P. and Gage, L. 1990. Recommendations in the Rescue, Wash and Care Techniques, and Rehabilitation of Oiled Pinnipeds in California.

Mate, Bruce R. and James T. Harvey, eds. 1987. Acoustical Deterrents in Marine Mammal Conflicts with Fisheries. Proceedings of a February 17-18, 1986, Workshop in Newport, Oregon. Oregon State University Se Grant College Program, Corvallis Oregon.

RPI International, Inc. 1987. Natural Resource Response Guide: Marine Mammals. Ocean Assessments Division, National Ocean Service, National Oceanic and Atmospheric Administration.

Gentry, R. and J. R. Holt. 1982. Equipment and Techniques for Handling Northern Fur Seals. NOAA Technical Report NMFS SSRF-758. U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service.

Smiley, B.D. 1982. The Effects of Oil on Marine Mammals. In: J.B. Sprague, J.H. Vandermeulen, and P.G. Wells, eds. Oil and Dispersants in Canadian Seas - Research Appraisal and Recommendations. Environmental Protection Service, EPS 3-EC-82-2, Canada.

## APPENDIX 7, CONT.

### CETACEANS (BALEEN AND TOOTHED WHALES)

#### GENERAL CONSIDERATIONS

Of all the marine mammals, cetaceans are probably the least sensitive to spilled oil. They rely on a thick blubber layer for insulation. No documented effects on whales or dolphins from oil spills have been reported.

Research on the susceptibility and sensitivity of small, warm-water cetaceans to oil indicates that if directly exposed to oil for short periods of time, transient effects to the skin will occur. In addition, short-term effects on feeding by baleen whales may occur but would be reversed within a few days after the whales moved into clean waters. Furthermore, bioaccumulation of petroleum hydrocarbons may occur, but its long-term effects are unknown.

The above considerations would apply in areas of open ocean where exposure would be relatively short-term. However, if oil is trapped within an ice lead, the duration of exposure and associated effects might be increased for whales (such as bowheads or belugas) that use the ice lead as a migration pathway.

#### RESPONSE STRATEGIES

Primary and secondary response strategies are the only feasible response strategies for this group of marine mammals. Some species, particularly large whales (such as bowheads), will avoid areas of intensive human activity and could possibly be steered away from a spill site. Likewise, harbor porpoise generally avoid ships and human activity. Other species, such as Dall's porpoise, are attracted to ship traffic and human activity and might be attracted to a spill. Use of any secondary response activities must have the approval of NMFS and the Federal OSC via the checklist in Appendix 24.

AGENCY CONTACTS: NMFS	AGENCY CONTACTS: ADF&G
Brad Smith 271-5006 (wk) 248-4211 (hm) 271-3030 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Kaja Brix 586-7235 (wk) 586-1637 (hm) 586-7012 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## **APPENDIX 7, CONT.**

### **CETACEANS, CONT.**

#### **MANUALS: DETERRENTS, CAPTURING**

Norris, Kenneth S. and Roger L. Gentry. 1974. Capture and Harnessing of Young California Gray Whales, Eschrichtius robustus. Marine Fisheries Review 36(4):58-64.

Mate, Bruce R. and James T. Harvey, eds. 1987. Acoustical Deterrents in Marine Mammal Conflicts with Fisheries. Proceedings of a February 17-18, 1986, Workshop in Newport, Oregon. Oregon State University Sea Grant College Program, Corvallis, Oregon.

## APPENDIX 7, CONT.

### POLAR BEARS

#### GENERAL CONSIDERATIONS

The population of polar bears (*Ursus maritimus*) in Alaska appears to be stable at 3,000 to 5,000 animals. Satellite telemetry indicates that two major stocks of polar bears are present: the northern stock occurs in the U.S. and Canadian Beaufort Sea and the western stock occurs in the Chukchi and Bering Seas. Research suggests that the polar bear densities in the two major stocks are similar.

Polar bears are migratory in that they move in association with the arctic ice pack. Polar bears rely on blubber, guard hair, and a dense under fur for insulation. One Canadian study has indicated that oiling polar bear fur and the polar bear's subsequent ingestion of the oil through grooming may be fatal.

Polar bears tend to occur in low densities over large areas and generally do not concentrate. They tend to be solitary animals or family groups following the annual variations in seal distributions which are associated with fluctuations in the ice conditions and water depth. Polar bears' preferred prey are ringed seals (*Phoca hispida*), whose populations may be more at risk to oil contamination than polar bears. Polar bears along the North Slope of Alaska will tend to gather in areas where ringed seal pups occur during the spring. Polar bears may concentrate where an abundance of beach-washed marine mammal carrion is available. There have been occasional observations of 20 to 50 polar bears associated with whale carcasses and whale butchering sites in Eskimo villages.

There is no single critical period for polar bears, although bears are most sensitive to disturbance during denning. Denning is initiated by late November with family groups emerging during late March and early April. Recent studies in the Beaufort Sea indicate that greater than 80 percent of the dens in this area are located on sea ice, primarily thick multiyear ice plates. Denning locations for the western stock are not as well documented, although a high density of dens is known to be located on Wrangell Island.

Polar bears rely on blubber, guard hair, and a dense under fur for insulation. Once the animal's fur is contaminated with oil, vigorous and continuous grooming occurs, which may result in renal failure and dysfunction of red blood cell production. While large quantities of oil may be tolerated by polar bears if the oil is rapidly excreted from the gastrointestinal tract, only a few milliliters of aspirated oil are fatal.



## **APPENDIX 7, CONT.**

### **POLAR BEARS, CONT.**

#### **RESPONSE STRATEGIES**

Primary Response. Primary response strategies should be emphasized for this species. Cleanup methods that disturb a den would probably result in the death of a cub, and perhaps the sow. Areas where dens are located should be avoided by all personnel at all times.

Secondary Response. This response is feasible at all times of the year, depending on the location (i.e., miles from shore) of the oil spill and should be incorporated with primary response activities.

The following is a general summary of deterrent methods, their effectiveness, and their limitations.

#### **Visual Methods**

There are no data indicating that visual methods are effective keeping polar bears away from a specific site.

#### **Auditory Methods**

The use of propane cannons and other firearms is effective, but the animals may habituate to the method. For short-term deterrence this may be adequate.

#### **Other Methods**

Herding polar bears with vehicles, boats, and aircraft has been successful.

Use of any secondary response activities must have the approval of FWS and the Federal OSC via the checklist in Appendix 24.

Tertiary Response. Capturing and treating polar bears is not considered a viable alternative for minimizing impacts on a population. However, treatment of individual animals may be considered on a case-by-case basis, with pregnant females and sows with cubs given priority. Careful consideration should be made of the added handling stress and the potential for spreading diseases. Severely oiled individuals should be euthanized and the carcasses disposed of in a manner that will preclude impacts on scavengers. Any capture or treatment of individual polar bears must be authorized by FWS.

**APPENDIX 7, CONT.**

**POLAR BEARS, CONT.**

**RESPONSE STRATEGIES, CONT.**

<b>AGENCY CONTACTS: FWS</b>	<b>AGENCY CONTACTS: ADF&amp;G</b>
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

**MANUALS: DETERRENTS, CAPTURING, CLEANING, AND TREATING**

Gulf Canada Resources Limited. N.D. Bear Protection Plan.

Schwiensburg, R.E., I. Stirling, M. Shoesmith, F. Juck, R. Engelhardt. December 1985. Action Plan for Protection of Polar Bears in the Event of a Major Oil Spill. Report to the Federal/Provincial Polar Bear Administrative Committee.

Engelhardt, R. 1981. Effects of Crude Oil on Polar Bears. The Eastern Arctic Marine Environmental Studies Program.

## APPENDIX 8

### WILDLIFE PROTECTION INFORMATION: TERRESTRIAL MAMMALS

#### GENERAL CONSIDERATIONS

Little research has been done on the effects of oil on terrestrial mammals or on their susceptibility to oiling in the wild. However, it is possible to extrapolate potential oil spill impacts based on an examination of existing studies and observations of the behavior, food preferences, and habitat requirements of individual species.

Given that marine oil spills are statistically the most likely source of wildlife contamination, terrestrial species that spend a great deal of time feeding or traveling in intertidal areas and nearshore waters are at the greatest risk of contacting oil. Bears, foxes, wolves, marten, and wolverines commonly scavenge for carrion in intertidal areas and are at high risk due to the likelihood of their encountering oiled carcasses. Mink and river otters are also at risk due to their frequent association with coastal habitats. Ungulates tend to spend a smaller percentage of their time in coastal areas, although deer and caribou do utilize these areas on a fairly consistent, seasonal basis.

Intertidal areas are used throughout the year, although use is particularly high for many terrestrial species during winter and early spring since beaches often provide the easiest routes for travel as well as a food source when other sources are scarce.

Inland oil spills along the Trans-Alaska Pipeline are most likely to impact animals utilizing rivers, streams, and wetland areas, since significant transport and spread of inland oil spills generally occurs via water. In addition to virtually all the species mentioned above, beavers, muskrats, and moose spend considerable time in or around inland waters. Muskoxen, bison, Dall sheep and mountain goats are also present in the Trans-Alaska Pipeline corridor and could be impacted by terrestrial spills or cleanup activities.

**Oil-related mortalities generally occur due to internal injury resulting from ingestion of oil, dermal absorption of oil, or as a result of hypothermia caused by oiling and matting of fur. Animals spending a great deal of time in the water will frequently groom to maintain insulating properties of their fur and therefore can be expected to encounter problems due to both ingestion and hypothermia. Experience with oiled sea otters supports this. Injuries associated with ingestion of oiled food will probably be the primary impact to mammals such as bears, foxes, wolves, marten, and wolverines, which feed in intertidal areas but do not commonly swim in the water.**

## **APPENDIX 8, CONT.**

### **GENERAL CONSIDERATIONS, CONT.**

Young animals may have lower tolerances to the toxic effects of oil. In addition to coming in direct contact with oil, young animals still being fed by parents could potentially be contaminated by parents bringing oil back to the nest or den on their fur or on food. Parents can also expose nursing young to petroleum hydrocarbons passed on in their milk.

### **RESPONSE STRATEGIES**

Primary Response. The most effective primary response strategy is to prevent oil from reaching the shoreline. This can be accomplished by mechanical means such as booming and skimming or, where environmental and weather conditions permit, by using chemical dispersants or *in situ* burning. In many cases, shoreline protection will be the only viable option.

Another, more labor-intensive type of primary response involves the manual removal of oiled carcasses from beaches. This strategy minimizes the chances of opportunistic feeders (such as bears, wolves, and foxes) ingesting oiled carrion. Similarly, removal of oiled kelp from intertidal areas, especially during the winter and spring, would eliminate a source of oil contamination for foraging Sitka black-tailed deer. However, removal of live seaweed from intertidal zones should be undertaken only after careful consideration of potential negative impacts on the intertidal community. If a decision is made to remove live oiled kelp, only the upper portion of the oiled leaves should be removed. The stipe and basal portion of the kelp leaves should be left to regenerate.

Secondary Response. A secondary response involves keeping animals away from oiled areas. Secondary responses will be evaluated on a case-by-case basis, given the fact that they are likely to be labor intensive, stressful, and dangerous to individual animals, and may only be effective for a short time, if at all.

If a decision is made to attempt a secondary response, visual and auditory deterrents can be utilized. Aircraft and ground vehicles can also be used to haze animals away from oiled areas. The information in Appendix 6, concerning methods for deterring birds, may be applicable in some cases. Various species will respond differently and habituate more or less rapidly than others. Use of any secondary response activities must have the approval of appropriate wildlife resources agencies and the Federal On-Scene Coordinator (OSC) via the checklist in Appendix 24.

Tertiary Response. A tertiary response involves capturing and treating oiled animals and is not recommended as a viable option for minimizing oil spill impacts on populations of terrestrial mammals. The effects of drugging or physically restraining animals, in addition to stress induced by handling, may actually increase mortalities. Another important consideration is the potential

## **APPENDIX 8, CONT.**

### **RESPONSE STRATEGIES, CONT.**

for an animal to contract and/or spread diseases while in captivity. If the health of the animals is not closely monitored, diseased animals can be released, spreading infections among wild populations. Consequently, severely oiled individuals should be euthanized and the carcasses disposed of in a manner that would preclude impacts on scavengers.

In some cases, however, treatment of individual animals may be considered for humane reasons. In the event that a tertiary response is initiated, information on capturing, handling, and treating terrestrial mammals is included or referenced in this document. The treatment of individual animals must be authorized by the appropriate agency.

### **TERRESTRIAL MAMMALS OF INTEREST**

The wildlife descriptions in the remainder of this appendix focus on terrestrial mammals that frequent coastal and/or inland areas subject to petroleum contamination. Species covered include ungulates (caribou, muskoxen, moose, Sitka black-tailed deer, Dall sheep, bison, and mountain goats), brown and black bears, wolves, and furbearers (red foxes, Arctic foxes, river otters, mink, muskrats, beavers, wolverine, and marten).

## **APPENDIX 8, CONT.**

### **UNGULATES**

Ungulates addressed in this appendix include caribou, muskoxen, moose, Sitka black-tailed deer, bison, mountain goats, and Dall sheep.

#### **GENERAL CONSIDERATIONS**

Ungulates do not generally utilize intertidal and nearshore habitats as intensively as many other terrestrial species. However, Sitka black-tailed deer frequently forage on the beach during the winter and spring and will occasionally swim short distances. Arctic and Alaska Peninsula caribou also frequent coastal areas during the summer to avoid insect harassment. Muskoxen occasionally feed in coastal areas.

All ungulates, with the exception of deer, could be impacted by inland spills along the Trans-Alaska Pipeline, especially if the oil spill enters rivers and streams. As with all animals, cleanup activities associated with inland spills can also create significant disturbances.

Deer, moose, and caribou could potentially swim or wade through oil and subsequently ingest oil by licking it off their fur. All ungulates are subject to ingesting contaminated vegetation, although, as mentioned above, deer are probably most subject to this risk due to their winter feeding habits. Ingestion of oil would probably be more harmful than external oiling alone since hypothermia resulting from oiled fur is unlikely to occur. Potential internal injuries include injury to the liver, kidneys, lungs, tissues around the eyes and nose, and the lining of the digestive tract. Internal injuries would be difficult to treat effectively.

Primary Response. Primary response activities should emphasize keeping spilled oil away from ungulate habitat.

Secondary Response. Secondary response activities will be evaluated on a case-by-case basis, keeping in mind that deterrence may be labor-intensive, stressful, and dangerous to individual animals, and perhaps only effective for a short time, if at all. Use of any secondary response activities must have the approval of appropriate wildlife resource agencies and the Federal OSC via the checklist in Appendix 24.

Tertiary Response. Capturing and treating ungulates is not recommended as a viable alternative for minimizing impacts on a population. Treatment of individual animals may be considered for humane reasons on a case-by-case basis. Careful consideration should be made of the added handling stress and the potential for spreading diseases. Severely oiled individuals should be euthanized and the carcasses disposed of in a manner that will preclude impacts on scavengers.

**APPENDIX 8, CONT.**

**UNGULATES, CONT.**

**RESPONSE STRATEGIES, CONT.**

Capture, euthanasia, and disposal of severely oiled individuals must be authorized by the appropriate agency.

## **APPENDIX 8, CONT.**

### **CARIBOU**

#### **GENERAL CONSIDERATIONS**

Several caribou herds are found throughout Alaska. All four Alaskan Arctic herds (Western Arctic, Teshekpuk Lake, Central Arctic, and Porcupine), the North and South Alaska Peninsula herds, and caribou on Unimak and Adak islands could potentially encounter oil in coastal areas. On the Arctic Slope and Alaska Peninsula, during the post-calving/insect relief season (mid-June to early August), thousands of caribou may be distributed along the coast, especially on river deltas, points, and other promontories to seek relief from mosquitos and flies. Arctic caribou also commonly wade or swim to barrier islands for the same reason.

Herds that could potentially encounter oil spilled in the Trans-Alaska Pipeline corridor include the Western and Central Arctic herds, and the Ray Mountains and Nelchina herds. The Kenai Lowlands herd could also potentially encounter inland spills resulting from Kenai area industrial operations or the Swanson River field.

Ingestion of oil may result from animals licking oil off their fur or eating oiled food. However, there is less opportunity for ingestion via feeding because caribou do not commonly eat beach-cast forage such as kelp. However, laboratory evidence indicates that reindeer will eat foods contaminated with oil, especially if the food is of a preferred type, such as lichen. Caribou are also potentially subject to disturbance from oil spill response and cleanup operations.

#### **RESPONSE STRATEGIES**

Primary Response. Primary response should emphasize keeping spilled oil away from caribou habitat. For example, caribou that are harassed by insects commonly aggregate in large groups on the windward side of deltas and promontories. These same sites may be where oil accumulates along the shoreline. Therefore, the primary response in both coastal and inland areas should be to prevent oil from accumulating in caribou gathering areas.

Secondary Response. Secondary response strategies will be evaluated on a case-by-case basis, keeping in mind that deterrence may be labor-intensive, stressful, and dangerous to individual animals, and perhaps only effective for a short time, if at all. During periods of insect harassment, caribou responses to hazing or herding are likely to be unpredictable. Pregnant cows moving to calving areas may be difficult to deter. Use of any secondary response activities must have the approval of appropriate wildlife resource agencies and the Federal OSC via the checklist in Appendix 24.



**APPENDIX 8, CONT.**

**CARIBOU, CONT.**

**RESPONSE STRATEGIES, CONT.**

Tertiary Response. See discussion under "Ungulates" on pages G-82 and G-83.

<b>AGENCY CONTACTS: FWS</b>	<b>AGENCY CONTACTS: ADF&amp;G</b>
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## APPENDIX 8, CONT.

### MUSKOXEN

#### GENERAL CONSIDERATIONS

Muskoxen occur most commonly around Cape Thompson, in the Arctic National Wildlife Refuge (ANWR), and on Nunivak Island. In addition, muskox herds have extended their range west from ANWR. Small herds are also present in the Sagavanirktok River corridor on a year-round basis. These animals may be affected by an oil spill from the Trans-Alaska Pipeline.

Individual or small numbers of muskoxen may occasionally frequent coastal areas, especially river deltas, apparently to feed on salt-rich coastal terrestrial plants. Storms could potentially bring oil into these areas where it could contaminate vegetation and then be ingested.

#### RESPONSE STRATEGIES

Primary, Secondary, and Tertiary Responses. See discussion under "Ungulates" on pages G-82 and G-83.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## APPENDIX 8, CONT.

### MOOSE

#### GENERAL CONSIDERATIONS

Moose are present throughout most of Alaska, with the exception of Kodiak Island, the Aleutian Islands, and islands in Southeast Alaska. Moose are generally found in inland habitats and do not often venture into intertidal areas. They prefer marshy areas, streams, and lakes and are commonly concentrated along river corridors on a year-round basis.

While moose are found all along the Trans-Alaska Pipeline corridor (except at the higher elevations in the Brooks, Alaska, and Chugach Ranges) they are most abundant between Pump Stations 7 and 12. As a result, moose are susceptible to ingesting aquatic vegetation contaminated by inland spills from the Trans-Alaska Pipeline. Since moose also enter fresh water to seek relief from insects during the summer, they could become externally oiled by contaminated water.

At the end of severe winters, many moose are likely to be close to starvation. When moose are in a weakened state, every effort should be made to avoid forcing them to move as a result of cleanup and response activities.

#### RESPONSE STRATEGIES

Primary, Secondary, and Tertiary Responses. See discussion under "Ungulates" on pages G-82 and G-83.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## APPENDIX 8, CONT.

### SITKA BLACK-TAILED DEER

#### GENERAL CONSIDERATIONS

Sitka black-tailed deer are present on the Kodiak Archipelago, throughout Prince William Sound, and in Southeast Alaska. They tend to be found closer to the shoreline during the winter and early spring and to follow the receding snow line to higher elevations in the summer.

Sitka black-tailed deer are susceptible to oil ingestion and external oiling. They often forage for kelp and beach grasses in intertidal areas during the winter and spring when other food sources are scarce. This behavior probably poses the greatest risk of mortality, especially since deer are often in poor physical condition at that time of the year. Deer have also been observed to swim short distances and could become externally oiled, if the water is contaminated with oil.

#### RESPONSE STRATEGIES

Primary Response. Primary response activities should emphasize keeping spilled oil away from deer habitat. Removal of oiled kelp from beaches should be considered during winter and spring months. However, care should be taken to determine whether the removal of live kelp will result in a net ecological benefit. If kelp is removed, only the upper portion of the oiled leaves should be removed. The stipe and basal portion of the kelp leaves should be left to regenerate.

Secondary and Tertiary Responses. See discussion under "Ungulates" on pages G-82 and G-83.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## APPENDIX 8, CONT.

### BISON

#### GENERAL CONSIDERATIONS

While several herds of bison are found throughout the state, only the Delta herd is likely to encounter spilled oil since it is present year-round in the Trans-Alaska Pipeline corridor between Big Delta and Pump Station 10. Bison are migratory and generally graze on grasses and forbs.

#### RESPONSE STRATEGIES

Primary, Secondary, and Tertiary Responses. See discussion under "Ungulates" on pages G-82 and G-83.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## **APPENDIX 8, CONT.**

### **MOUNTAIN GOATS**

#### **GENERAL CONSIDERATIONS**

Mountain goats are found throughout Southeast Alaska and in rugged terrain of the Chugach, Wrangell, and Alaska Ranges. They are, however, most likely to encounter oil spills along the Trans-Alaska Pipeline corridor where it passes through the Chugach Mountains.

Potential disturbances resulting from oil spill cleanup operations could create more problems than if mountain goats contacted oil. Mountain goats are particularly subject to disturbance when kids are born (late May to early June) and during breeding season (November and December). Kids are especially vulnerable to injury when panicked in rough terrain.

#### **RESPONSE STRATEGIES**

Primary, Secondary, and Tertiary Responses. See discussion under "Ungulates" on pages G-82 and G-83.

<b>AGENCY CONTACTS: FWS</b>	<b>AGENCY CONTACTS: ADF&amp;G</b>
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## APPENDIX 8, CONT.

### DALL SHEEP

#### GENERAL CONSIDERATIONS

Dall sheep occur in many of the mountainous areas above 2,500 feet along the Trans-Alaska Pipeline corridor. In particular, they are found from Slope Mountain through the upper Dietrich River in the Brooks Range; near Black Rapids, south of Delta, in the Alaska Range; and in the area around Pump Station 12 in the Chugach Range. They prefer ridges, steep slopes, and alpine meadows and are rarely found below the treeline. Sheep also gather at mineral licks which occur near the pipeline at Slope, Table, and Snowden Mountains and Snowden Creek.

Dall sheep could potentially be oiled by an oil spill originating from the Trans-Alaska Pipeline, although the disturbance created by spill cleanup operations would probably be of more concern than any actual contact with oil. Dall sheep are particularly subject to disturbance during lambing season (late May to early June) and breeding season (late November to early December). Lambs are especially vulnerable to injury when panicked in rough terrain.

#### RESPONSE STRATEGIES

Primary, Secondary, and Tertiary Responses. See discussion under "Ungulates" on pages G-82 and G-83.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## **APPENDIX 8, CONT.**

### **BROWN AND BLACK BEARS**

#### **GENERAL CONSIDERATIONS**

While "brown" and "grizzly" bears are classified as the same species, in popular usage, "brown bear" refers to those individuals living along the coast, while "grizzly bear" refers to individuals living in interior areas. "Brown bear" will be used here to refer to both coastal and inland populations.

Brown and black bears can be found in coastal and inland areas throughout most of the state. Brown bears are present in many riparian corridors, such as the Sagavanirktok Valley, and are therefore subject to encountering oil spilled from the Trans-Alaska Pipeline into those areas. Brown bears are not found on islands south of Frederick Sound in Southeast Alaska, the Aleutian Islands west of Unimak Island, and the Yukon-Kuskokwim Delta. While black bears are distributed throughout most of the forested areas of the state, they are not generally found in areas covered by tundra or muskeg (e.g., in areas north of the Brooks Range or on the Seward Peninsula). Moreover, black bears do not occur on Kodiak, Montague, or Hinchinbrook Islands or on the Alaska Peninsula beyond Lake Iliamna. Black bears are present in Southeast Alaska, except on Admiralty, Baranof, Chichagof, and Kruzof Islands.

Most brown and black bear activity along the coast occurs during the spring and summer and consists of scavenging for carrion and feeding on intertidal invertebrates, such as razor clams. Brown bears have been observed to feed on beached carcasses of marine mammals, especially in the northern areas of the state. Brown bears would also be likely to feed on large terrestrial animals, such as caribou and moose, that were disabled or killed by oiling. It is important, therefore, to locate and safely dispose of all oiled carrion.

Bears are especially active during the salmon season and will congregate along salmon streams throughout the state to feed on live and dead fish. In the early spring, they also forage for emergent vegetation in wetland areas. Therefore, they may be especially likely to ingest oil in the process of feeding or incidentally to grooming. Bears are also capable of swimming and may become externally oiled.

Bears do not appear to avoid oil, and in some cases may be attracted to it. Although there is little specific information available about the sensitivity of brown or black bears to oil, evidence from polar bears suggests that bears may be extremely sensitive to ingested oil and to skin contact with oil.



## APPENDIX 8, CONT.

### **BROWN AND BLACK BEARS, CONT.**

There is no literature on treating oiled brown and black bears, although work done on polar bears, cited in Appendix 7, may be applicable. For example, brown and black bears, like polar bears, may be especially susceptible to hemorrhagic enteritis induced by the stress of capture and transport.

### **RESPONSE STRATEGIES**

Primary Response. Primary response activities should emphasize keeping spilled oil away from bear habitat and should include immediate removal of oiled carrion.

Secondary Response. Secondary response activities will be evaluated on a case-by-case basis, keeping in mind that deterrence may be labor-intensive, stressful, and dangerous to individual animals, and perhaps only effective for a short time, if at all. Use of any secondary response activities must have the approval of appropriate wildlife resource agencies and the Federal OSC via the checklist in Appendix 24.

Tertiary Response. Capturing and treating bears is not recommended as a viable alternative for minimizing impacts on a population. Treatment of individual animals may be considered for humane reasons on a case-by-case basis. Careful consideration should be made of the added handling stress and the potential for spreading diseases. Severely oiled individuals should be euthanized and the carcasses disposed of in a manner that will preclude impacts on scavengers.

Treatment techniques have not been developed specifically for brown or black bears. However, information on treating oiled polar bears in Appendix 7 is likely to be relevant to black bears.

Capture and treatment of individual animals must be authorized by the appropriate agency.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## APPENDIX 8, CONT.

### WOLVES

#### GENERAL CONSIDERATIONS

Wolves occur throughout mainland Alaska as well as on Unimak Island, and on major islands in Southeast Alaska (except for Admiralty, Baranof, and Chichagof Islands). Wolves are susceptible to oil ingestion and external oiling. Ingestion of oil would probably pose the greatest risk to wolves, since they are opportunistic feeders and will consume carrion found along the beach as well as terrestrial mammals disabled or killed by oil contamination. Anecdotal accounts suggest that wolves may be attracted to oil.

Wolves in the northern, western, and southwestern areas of the Alaska have been observed to carry rabies.

#### RESPONSE STRATEGIES

Primary Response. Primary response activities should emphasize keeping spilled oil away from wolf habitat and should include immediate removal of oiled carrion.

Secondary Response. Secondary response activities will be evaluated on a case-by-case basis, keeping in mind that deterrence may be labor-intensive, stressful, and dangerous to individual animals, and perhaps only effective for a short time, if at all. Use of any secondary response activities must have the approval of appropriate wildlife resource agencies and the Federal OSC via the checklist in Appendix 24.

Tertiary Response. Tertiary response activities are not recommended, since wolves occasionally carry rabies. Severely oiled individuals should be euthanized and the carcasses disposed of in a manner that will preclude impacts on scavengers. Capture, euthanasia, and disposal of severely oiled individuals must be authorized by the appropriate agency.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## **APPENDIX 8, CONT.**

### **FURBEARERS**

Furbearers addressed in this appendix include red foxes, Arctic foxes, mink, river otters, muskrats, beavers, wolverine, marten, and miscellaneous small mammals.

### **GENERAL CONSIDERATIONS**

Aquatic furbearers such as river otters, mink, muskrats, and beavers, spend large amounts of time in the water and rely on their fur for insulation. If externally oiled, these animals could become hypothermic and die. In addition, these species tend to groom frequently to maintain the insulating properties of their fur. This behavior places them at additional risk of ingesting oil. Arctic foxes, while they do not commonly enter the water, likewise rely heavily on their fur for insulation and groom extensively.

Many, but not all, furbearers are opportunistic scavengers. This includes foxes, river otters, mink, wolverine, and marten. They often search intertidal areas for carrion, especially during the winter and spring. This behavioral characteristic places those species at risk of ingesting oiled food. Animals like river otters and mink, which spend considerable time in the water and feed on carrion, are in the highest risk group. If oil cannot be contained before it comes ashore, the best strategy is to focus on removing oiled carrion from habitats used by scavenger species.

There are no manuals on treating oiled terrestrial furbearers. However, manuals developed for sea otters contain information that is likely to be relevant to aquatic furbearers.

### **RESPONSE STRATEGIES**

Primary Response. Primary response activities should emphasize keeping spilled oil away from furbearer habitat and should include immediate removal of oiled carrion.

Secondary Response. Secondary response activities will be evaluated on a case-by-case basis, keeping in mind that deterrence may be labor-intensive, stressful, and dangerous to individual animals, and perhaps only effective for a short time, if at all. Use of any secondary response activities must have the approval of appropriate wildlife resource agencies and the Federal On-Scene Coordinator (OSC) via the checklist in Appendix 24.

Tertiary Response. Capturing and treating oiled furbearers is not recommended as a viable alternative for minimizing impacts on a population. Treatment of individual animals may be considered for humane reasons on a case-by-case basis. Careful consideration should be made of the added handling stress and the potential for spreading diseases. Severely oiled individuals

## **APPENDIX 8, CONT.**

### **FURBEARERS, CONT.**

### **RESPONSE STRATEGIES, CONT.**

should be euthanized and the carcasses disposed of in a manner that will preclude impacts on scavengers. Capture, euthanasia, and disposal of severely oiled individuals must be authorized by the appropriate agency.

### **GENERAL REFERENCES FOR EFFECTS OF TOXIC SUBSTANCES ON FURBEARERS**

Novak, M. et al. 1987. Wild Furbearer Management and Conservation in North America.

Chapman, J.A. and D. Pursley (eds). 1981. Worldwide Furbearer Conference Proceedings.

## **APPENDIX 8, CONT.**

### **RED FOXES**

#### **GENERAL CONSIDERATIONS**

Red foxes are found throughout the state, except for the western Aleutian Islands, Prince William Sound, and some islands in Southeast Alaska. Red foxes feed on a wide variety of coastal organisms and can be expected to scavenge whatever they find (including carrion), especially during the winter and spring. Foxes, like many other mammals, often utilize beaches for travel routes, particularly when the snow is deep. Therefore, red foxes may ingest oil as well as become oiled externally following an oil spill in those areas.

Red foxes are one of the primary vectors for rabies in northern, western, and southwestern Alaska.

#### **RESPONSE STRATEGIES**

Primary and Secondary Responses. See discussion under "Furbearers" on pages G-95 and G-96.

Tertiary Response. Tertiary response activities are not recommended, since red foxes occasionally carry rabies. Severely oiled individuals should be euthanized and the carcasses disposed of in a manner that will preclude impacts on scavengers. Capture, euthanasia, and disposal of severely oiled individuals must be authorized by the appropriate agency.

<b>AGENCY CONTACTS: FWS</b>	<b>AGENCY CONTACTS: ADF&amp;G</b>
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## APPENDIX 8, CONT.

### ARCTIC FOXES

#### GENERAL CONSIDERATIONS

Arctic foxes are ubiquitous in treeless coastal areas of the state. Their range extends from the Arctic Slope, through western and southwestern Alaska, and onto the Aleutian chain. Their numbers are subject to severe natural fluctuations. Although foxes are mostly solitary, concentrations of tens to hundreds have been observed scavenging around large food sources, such as whale carcasses, polar bear kills, or dumps.

Arctic foxes are particularly susceptible to oil contamination because they: (1) inhabit coastal areas as well as the pack ice that could be oiled, (2) spend a considerable amount of time scavenging and could contact oiled carcasses, (3) groom extensively and could ingest oil, and (4) break into ringed seal lairs to hunt for newborn seals and could encounter oil brought to the lair by an oiled seal. Since an Arctic fox's chief protection against the cold is a thick coat that traps air, it is subject to hypothermia if its coat becomes matted by oil.

Arctic foxes are one of the primary vectors for rabies in northern, western, and southwestern Alaska.

#### RESPONSE STRATEGIES

Primary and Secondary Responses. See discussion under "Furbearers" on pages G-95 and G-96.

Tertiary Response. Tertiary response activities are not recommended for any reason since Arctic foxes occasionally carry rabies. Severely oiled individuals should be euthanized and the carcasses disposed of in a manner that will preclude impacts on scavengers. Capture, euthanasia, and disposal of severely oiled individuals must be authorized by the appropriate agency.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## APPENDIX 8, CONT.

### MINK

#### GENERAL CONSIDERATIONS

Mink are found throughout the state, except for Kodiak Island, the Aleutian Islands, and most of the Arctic Slope. Mink commonly occur in both coastal and inland riparian areas. Mink living in coastal areas frequently cross the intertidal zone and spend large amounts of time swimming and diving for food. They also scavenge for carrion, especially during the spring. Consequently, contamination of mink fur by oil could occur, which would result in a loss of insulation and hypothermia. Mink also groom frequently and could ingest oil by grooming or eating oiled food. Due to these behavioral characteristics, mink are one of the furbearing species at greatest risk from an oil spill.

#### RESPONSE STRATEGIES

Primary and Secondary Responses. See discussion under "Furbearers" on pages G-95 and G-96.

Tertiary Response. Capturing and treating mink is not recommended as a viable alternative for minimizing impacts on a population. Treatment of individual animals may be considered for humane reasons on a case-by-case basis. Careful consideration should be made of the added handling stress and the potential for spreading diseases. Severely oiled individuals should be euthanized and the carcasses disposed of in a manner that will preclude impacts on scavengers.

The manuals on cleaning sea otters, listed in Appendix 7, are generally applicable to cleaning mink and other aquatic furbearers. Capture, euthanasia, and disposal of severely oiled individuals must be authorized by the appropriate agency.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## APPENDIX 8, CONT.

### RIVER OTTERS

#### GENERAL CONSIDERATIONS

River otters occur throughout Alaska, except for the Aleutian Islands and the area north of the Brooks Range. Like mink, river otters spend a great deal of time swimming and diving in nearshore and inland riparian areas for food. While they generally prefer live prey, river otters are also opportunistic feeders and will eat carrion found in intertidal areas. While in the water or traversing the intertidal zone, their fur can become oiled, resulting in a loss of insulation and hypothermia. River otters also groom frequently and can ingest oil as a result. Along with mink, river otters are one of the furbearing species at greatest risk during an oil spill.

#### RESPONSE STRATEGIES

Primary and Secondary Responses. See discussion under "Furbearers" on pages G-95 and G-96.

Tertiary Response. Capturing and treating river otters is not recommended as a viable alternative for minimizing impacts on a population. Treatment of individual animals may be considered for humane reasons on a case-by-case basis. Careful consideration should be made of the added handling stress and the potential for spreading diseases. Severely oiled individuals should be euthanized and the carcasses disposed of in a manner that will preclude impacts on scavengers.

The manuals on cleaning sea otters, listed in Appendix 7, are generally applicable to cleaning river otters and other aquatic furbearers. Capture, euthanasia, and disposal of severely oiled individuals must be authorized by the appropriate agency.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)



## APPENDIX 8, CONT.

### MUSKRATS

#### GENERAL CONSIDERATIONS

Muskrats occur throughout most of the Alaska mainland, except for the southern Alaska Peninsula and areas north of the Brooks range. Muskrats live in and around wetland areas and generally feed on aquatic vegetation, invertebrates, and fish. Therefore, they are subject both to ingesting oil on their food and external oiling. Once their fur becomes oiled, it rapidly loses its insulating properties and muskrats can become hypothermic. Muskrats also groom frequently and can ingest oil as a result. Significant muskrat mortalities have been noted following past oil spills in inland waters.

#### RESPONSE STRATEGIES

Primary and Secondary Responses. See discussion under "Furbearers" on pages G-95 and G-96.

Tertiary Response. Capturing and treating muskrats is not recommended as a viable alternative for minimizing impacts on a population. Treatment of individual animals may be considered for humane reasons on a case-by-case basis. Careful consideration should be made of the added handling stress and the potential for spreading diseases. Severely oiled individuals should be euthanized and the carcasses disposed of in a manner that will preclude impacts on scavengers.

The manuals on cleaning sea otters, listed in Appendix 7, are generally applicable to cleaning muskrats and other aquatic furbearers. Capture, euthanasia, and disposal of severely oiled individuals must be authorized by the appropriate agency.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## APPENDIX 8, CONT.

### **BEAVERS**

#### **GENERAL CONSIDERATIONS**

Beavers are present throughout most of the forested areas of the state, including Kodiak Island. They inhabit inland ponds, lakes, and streams and rely on their fur for insulation. Accordingly, they are at risk from external oiling, which could result in hypothermia. Grooming behavior and consumption of contaminated aquatic plants could also result in oil ingestion.

#### **RESPONSE STRATEGIES**

Primary and Secondary Responses. See discussion under "Furbearers" on pages G-95 and G-96.

Tertiary Response. Capturing and treating beavers is not recommended as a viable alternative for minimizing impacts on a population. Treatment of individual animals may be considered for humane reasons on a case-by-case basis. Careful consideration should be made of the added handling stress and the potential for spreading diseases. Severely oiled individuals should be euthanized and the carcasses disposed of in a manner that will preclude impacts on scavengers.

The manuals on cleaning sea otters, listed in Appendix 7, are generally applicable to cleaning beavers and other aquatic furbearers. Capture, euthanasia, and disposal of severely oiled individuals must be authorized by the appropriate agency.

<b>AGENCY CONTACTS: FWS</b>	<b>AGENCY CONTACTS: ADF&amp;G</b>
Catherine Berg 786-3598 (wk)  694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## APPENDIX 8, CONT.

### WOLVERINE

#### GENERAL CONSIDERATIONS

Wolverine are present throughout most of mainland Alaska and are found in both inland and coastal areas. Wolverine may be attracted to coastal areas to feed on carrion of all types, including marine mammals, fish, and birds. As a result, wolverine could ingest oil and/or become oiled externally. They frequently tend to scavenge in intertidal areas during the winter and spring. In addition, they often use beaches as winter and spring travel routes.

#### RESPONSE STRATEGIES

Primary and Secondary Responses. See discussion under "Furbearers" on pages G-95 and G-96.

Tertiary Response. Tertiary response activities are not recommended due to the extreme difficulty in capturing and handling wolverines. Severely oiled individuals should be euthanized and the carcasses disposed of in a manner that will preclude impacts on scavengers. Capture, euthanasia, and disposal of severely oiled individuals must be authorized by the appropriate agency.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## APPENDIX 8, CONT.

### MARTEN

#### GENERAL CONSIDERATIONS

Marten are present throughout most of the forested portions of Alaska. Marten live along inland bogs and streams as well as in coastal areas. They commonly feed on birds and small rodents. Since marten are opportunistic feeders, they could potentially scavenge oiled carrion, including salmon.

#### RESPONSE STRATEGIES

Primary, Secondary, and Tertiary Responses. See discussion under "Furbearers" on pages G-95 and G-96.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
Phillip Johnson 786-3483 (wk) 345-0300 (hm) 786-3350 (fax)	Jack Winters 459-7285 (wk) 479-2320 (hm) 456-3091 (fax)

## APPENDIX 8, CONT.

### MISCELLANEOUS SMALL MAMMALS

#### GENERAL CONSIDERATIONS

Small mammals, such as ground squirrels, voles, lemmings, and hares are ubiquitous throughout the state, and undergo large fluctuations in numbers.

#### RESPONSE STRATEGIES

Primary Response. Primary response activities should emphasize keeping spilled oil away from small mammal habitat.

Secondary Response. Secondary response activities are not recommended.

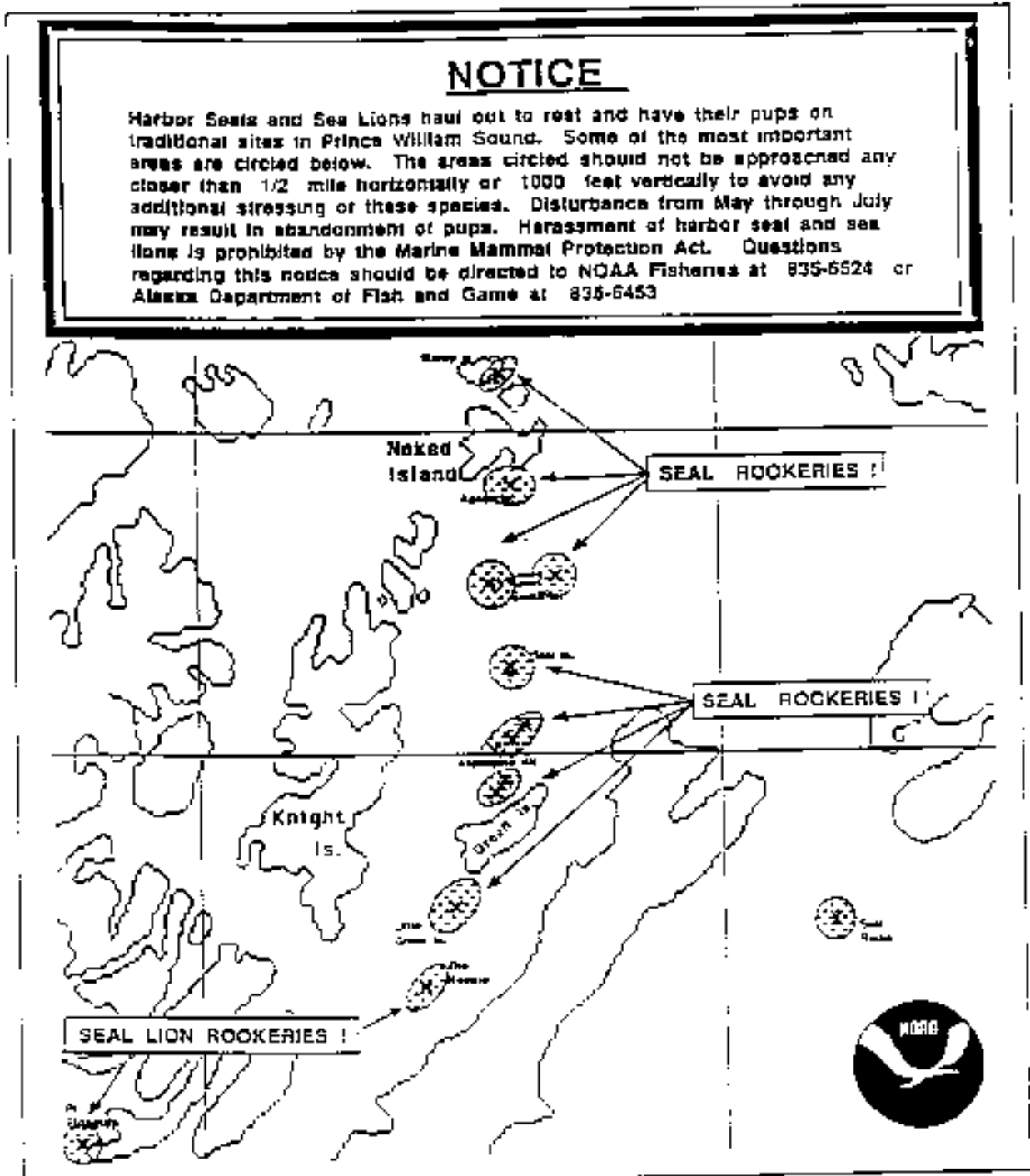
Tertiary Response. Tertiary response activities are not recommended. Treatment of individual animals may be considered for humane reasons on a case-by-case basis. Careful consideration should be made of the added handling stress and the potential for spreading diseases. Severely oiled individuals should be euthanized and the carcasses disposed of in a manner that will preclude impacts on scavengers. Capture, euthanasia, and disposal of severely oiled individuals must be authorized by the appropriate agency.

AGENCY CONTACTS: FWS	AGENCY CONTACTS: ADF&G
Catherine Berg 786-3598 (wk) 694-7379 (hm) 786-3350 (fax)	Mark Fink 267-2338 (wk) 337-7933 (hm) 267-2464 (fax)
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## APPENDIX 9

### EXAMPLE OF WILDLIFE PROTECTION ADVISORY FOR RESPONSE-RELATED AIRCRAFT AND VESSEL TRAFFIC AND THE NEWS MEDIA



## APPENDIX 9, CONT.



U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration

### SEAL ADVISORY

Cleaning of harbor seal haulouts will stop by May 15. After that date unauthorized persons may not approach within one-half mile of seal or sea lion haulout or rookery areas. Aircraft may not fly lower than one-thousand feet over such areas. Disturbance of seal rookeries or haulouts is a violation of Federal Law.

Because of the large number of cleanup personnel working at various sites across Prince William Sound and the Gulf of Alaska, newborn seal pups may be encountered in unexpected areas. Seals which are not in distress are to be left alone. ONLY heavily-oiled pups or those which have been permanently abandoned by their mothers should be captured. If pups are encountered that appear to meet these criteria, they should be observed at some distance for at least 30 minutes to confirm that they are either heavily-oiled or abandoned before any capture attempt is made. Indications of abandonment are lone pups which are not associated with a female for extended periods of time, emaciated appearance, and continuous crying. Pups which are only lightly-oiled and are still being attended by females should not be captured as their likelihood of long-term survival is greater in the wild.

If pups are determined to be either heavily-oiled and/or abandoned after extended observations, they should be captured and immediately transported to the Sea Otter Rehabilitation Centers in Valdez (333-4512), Seward (224-7041), or the Alpine Veterinary Clinic in Anchorage (345-1515). No attempts should be made to clean or feed pups unless transport will be delayed beyond 12 hours.





## APPENDIX 10

### EXAMPLE OF INFORMATION BULLETIN ON PROHIBITIONS ON THE COLLECTION OF WILDLIFE PARTS

# Fact Sheet



## REGULATIONS FOR MARINE MAMMAL PARTS BEACH FOUND BY NON-NATIVES

February 1996

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**Fish and Wildlife Service • U.S. Department of the Interior**

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The U.S. Fish & Wildlife Service manages sea otters, polar bears and walrus in Alaska. This fact sheet addresses often asked questions about beach found marine mammal parts collected by Non-Natives. Similar Fact Sheets addressing Alaskan Natives and marine mammals are also available. For answers to specific questions please contact one of the offices listed on the back of this sheet.

#### WHO MAY COLLECT BEACH FOUND PARTS?

Federal regulations allow the collection of parts by Non-Natives (and Natives) from some dead marine mammals found on the beach or land within 1/4 mile of the ocean (including bays and estuaries), depending on land ownership.

#### WHERE CAN BEACH FOUND PARTS BE COLLECTED?

Regulations vary depending on land ownership. It is the collector's responsibility to know whose lands they are visiting. Collectors should check for additional regulations established by individual landowners (Federal, State, or private) before removing any resource. Collection of all animal parts (including marine mammals) is prohibited on National Park Service lands.

#### WHAT PARTS MAY BE COLLECTED?

Skulls, bones, teeth or ivory from beach found sea otter, polar bear and walrus may be collected. The skins, meat and organs from these animals may not be collected. Animal parts (including marine mammals) of an archeological or paleontological origin may not be collected from Federal or State lands.

#### WHAT ABOUT OTHER MARINE MAMMALS?

The National Marine Fisheries Service (NMFS) has responsibility for managing whales, seals, sea lions, dolphins, and porpoises. Detached hard parts, skulls and bones, from a non-endangered species may be collected. Most large whales (more than 25 feet in length) are endangered and parts cannot be collected. For specific questions of these species, contact the NMFS at a location listed on the back of this sheet.

## APPENDIX 10, CONT.

### ARE THERE REPORTING REQUIREMENTS FOR BEACH FOUND PARTS?

Collected parts from sea otter, polar bear, and walrus must be presented to a Fish and Wildlife Service (Service) representative for registration and/or tagging. Parts from other species must be registered with NMFS. Parts must be reported within 30 days of the find. Once these parts are registered, they become property of the finder and cannot be sold, traded or given away without permission from the registering agency. The location of tagging representatives is available from the Service's Marine Mammals Management Office, or other offices listed below.

### WHAT ABOUT FOSSIL IVORY?

Fossil ivory (including walrus, mammoth and mastodon), archeological and paleontological materials are regulated by an array of Federal and State laws and these items may not be collected on any State or Federal public lands. Fossil ivory may be collected on private lands with permission of the landowner. Fossil ivory collected on private lands is not regulated under the Marine Mammal Protection Act and does not have to be registered.

### FOR MORE INFORMATION, PLEASE CONTACT THE FOLLOWING OFFICES:

U.S. Fish & Wildlife Service, Supervisor, Marine Mammals Management Office, 1011 East Tudor Road, Anchorage, AK 99503, (907) 786-3800 or 1-800-362-5148.

U.S. Fish & Wildlife Service Assistant Regional Director, Division of Law Enforcement, 1011 East Tudor Road, Anchorage, AK 99503, (907) 786-3311.

U.S. Fish & Wildlife Service, Senior Resident Agent, 605 W. 4<sup>th</sup> Avenue, Room 57, Old Federal Building, Anchorage, AK 99501, (907) 271-2828.

U.S. Fish & Wildlife Service, Special Agent, P.O. Box 346, Bethel, AK 99557, (907) 543-3151.

U.S. Fish & Wildlife Service, Senior Resident Agent, 1412 Airport Way, Fairbanks, AK 99701, (907) 456-0255.

U.S. Fish & Wildlife Service, Special Agent, 624 Mill Street, Ketchikan, AK 99901, (907) 225-9694.

National Marine Fisheries Service, 701 C Street, P.O. Box 43, Anchorage, AK 99513, (907) 271-5006.

National Marine Fisheries Service, 709 W 9<sup>th</sup> Street, Suite 453, P.O. Box 21668, Juneau, AK 99802, (907) 586-7221.

National Park Service, National Register Archeologist, 2525 Gambell Street, Anchorage, AK 99503, (907) 257-2559.

State Historic Preservation Officer, Office of History and Archeology, 3601 C Street, Suite 1278, Anchorage, AK 99503, (907) 269-8727.

## APPENDIX 11

### DATA SHEET FOR COLLECTED DEAD, OILED WILDLIFE<sup>2</sup>

Date: _____	Oil Spill Incident:
Location (specific):	
Species Found:	
Specimen Obviously Oiled? (circle one)	Yes No
Was Specimen Scavenged? (circle one)	Yes No
Collected by:	
Printed Name	
Signature	
Date	
Telephone #	
Affiliation	
Relinquished to:	
Printed Name	
Signature	
Date	
Telephone #	
Affiliation	

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<sup>2</sup>Supplies needed for collection and storage of dead, oiled wildlife include: rubber gloves, plastic bags, data sheets, and freezers.

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## APPENDIX 12

### DATA SHEET FOR COLLECTED LIVE, OILED WILDLIFE

Date: \_\_\_\_\_ Oil Spill Incident: \_\_\_\_\_

Rehabilitation Identification Number: \_\_\_\_\_

Capture Location (specific): \_\_\_\_\_

Latitude: \_\_\_\_\_

Longitude: \_\_\_\_\_

Common Name: \_\_\_\_\_

Genus: \_\_\_\_\_ Species: \_\_\_\_\_

Specimen Obviously Oiled? (Circle one):    Yes    No

Extent of Oiling (circle one):

1. Completely covered

3. Discrete spots

2. Ventral or dorsal surface only

4. No obvious oil

Date First Gavaged: \_\_\_\_\_

Date Cleaned: \_\_\_\_\_

Date Released: \_\_\_\_\_

Location of Release: \_\_\_\_\_

Date Died: \_\_\_\_\_

Collected by:

Printed Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_ Telephone # \_\_\_\_\_

Affiliation \_\_\_\_\_

Relinquished to:

Printed Name \_\_\_\_\_

Signature \_\_\_\_\_

Date \_\_\_\_\_ Telephone # \_\_\_\_\_

Affiliation \_\_\_\_\_

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## APPENDIX 13

### **ACTION-ITEM CHECKLIST FOR WILDLIFE RESOURCE AGENCIES DURING THE FIRST 24 HOURS ON-SCENE: FEDERALLY-FUNDED RESPONSE**

Check in with the U.S. Coast Guard (USCG) Federal On-Scene Coordinator (OSC) or the Federal OSC's representative:

- Clarify/reiterate respective agency roles.
- Determine who will discuss wildlife issues with news media and responsible party representatives (if applicable).
- Establish timetable for providing Federal OSC with a recommendation regarding whether or not to establish a wildlife capture and treatment program.
- Establish communication link with USCG personnel.
- Secure work space, transportation, and lodging (if required).
- Determine feasibility and logistical arrangements for traveling to the affected area.

Evaluate situation:

- Gather information supporting each factor in Appendix 1.
- Get firsthand information, if possible, by visiting the area where wildlife impacts have and could occur.
- Interview other "first responders" who may have knowledge of wildlife impacts (e.g., USCG, Alaska Department of Fish and Game, Alaska Department of Environmental Conservation, Fish and Wildlife Service, and National Marine Fisheries Service representatives).
- Report findings to home office and other affected natural resource trustees; obtain additional information that must be considered when determining whether or not to begin a wildlife capture and treatment program.
- Make recommendation to Federal OSC on whether or not to establish a capture and treatment program.

## APPENDIX 13, CONT.

### Miscellaneous:

- Establish procedure for dealing with live, oiled wildlife already captured.
- Identify potential wildlife treatment facilities through discussions with local decision makers (e.g., mayor, city manager, interest group).
- Conduct cursory check of potential treatment facilities for adequacy (in person or by phone) using facility requirements information in Appendices 22 and 23.
- Notify capture and treatment contractors whose assistance may be required.
- Contact owners of wildlife capture and treatment equipment and materials to determine its availability.
- Establish a morgue and procedures for dealing with dead, oiled wildlife already collected and dead, oiled wildlife to be collected.



## APPENDIX 14

### CHECKLIST OF SUGGESTED OFFICE SUPPLIES AND DOCUMENTS TO TAKE ON-SCENE

#### Word/Data Processing:

- Portable computer with database, spreadsheet, and word-processing programs
- Portable printer and printer paper
- Computer disks
- Blank identification tags

#### Office supplies:

- File folders and file folder box
- Scotch tape and masking tape
- Stapler and staple remover
- Paper clips
- Pencils
- Pens
- Scissors
- Marking pens
- Highlighters
- Cork for bulletin boards
- Push pins
- Clip boards
- Paper for signs
- Yellow pads
- Name tags
- Office log book (bound)
- Field notebooks (bound)
- Phone log with carbons

#### Documents:

- Wildlife Protection Guidelines for Alaska
- Copies of instructions on wildlife collection and handling
- Bird identification books
- Wildlife collection and treatment manuals
- Waiver liability release forms
- Maps of impact area
- Wildlife data/collection forms

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## APPENDIX 15

### **ACTION ITEM CHECKLIST FOR WILDLIFE RESOURCE AGENCIES DURING THE FIRST 24 HOURS ON-SCENE: RESPONSIBLE PARTY RESPONSE**

Check in with the U.S. Coast Guard (USCG) Federal On-Scene Coordinator (OSC) or the Federal OSC's representative:

- Clarify/reiterate respective agency roles.
- Determine who will discuss wildlife issues with the news media.
- Establish communication links with USCG personnel.
- Secure work space, transportation, and lodging (if required).
- Determine feasibility and logistical arrangements for traveling to the affected area.

Evaluate situation:

- Gather information supporting each factor that must be considered when determining whether to begin a wildlife capture and treatment program.
- Get firsthand information, if possible, by visiting the area where wildlife impacts have and could occur.
- Interview other "first responders" who may have knowledge of wildlife impacts (e.g., USCG, Alaska Department of Fish and Game, Alaska Department of Environmental Conservation, Fish and Wildlife Service, and National Marine Fisheries Service representatives).
- Report findings to home office and other affected wildlife resource agencies; obtain additional information that must be considered when determining whether to begin a wildlife capture and treatment program.

Meet with Responsible Party Representatives:

- Ascertain their proposed wildlife protection response strategy.

## APPENDIX 15, CONT.

- Provide advice and assistance on appropriate response strategies.
- Approve, if appropriate, proposed secondary or tertiary wildlife response strategies.
- Assist, if necessary, through discussions with local decision makers (e.g., mayor, city manager, interest group representatives) in identifying potential wildlife treatment facilities.
- Discuss procedures for dealing with live, oiled wildlife that may already have been captured by unauthorized members of the public.
- Discuss procedure for dealing with dead, oiled wildlife already collected and to be collected.

## APPENDIX 16

### STATE AND FEDERAL PERMITS AND/OR AUTHORIZATIONS REQUIRED FOR HAZING, COLLECTING OR HOLDING LIVE ANIMALS<sup>1</sup>

WILDLIFE	ALASKA DEPARTMENT OF FISH AND GAME		FISH AND WILDLIFE SERVICE		NATIONAL MARINE FISHERIES SERVICE	
	Collect and Hold	Haze	Collect and Hold	Haze	Collect and Hold	Haze
Migratory Birds	No <sup>2</sup>	Yes <sup>3</sup>	Yes <sup>4</sup>	No <sup>5</sup>	No	No
Sea Otters, Walruses, and Polar Bears	No	No	Yes	Yes <sup>4</sup>	No	No
Whales, Porpoises, Seals, and Sea Lions	No <sup>2</sup>	No <sup>2</sup>	No	No	Yes	Yes
Terrestrial Mammals	Yes	Yes	No	No	No	No

<sup>1</sup> See Appendix 24, "Fax Cover Sheet" (page G-160) for a list of agency personnel to contact for appropriate permits and authorizations.

<sup>2</sup> An Alaska Department of Fish and Game (ADF&G) permit is also needed to collect, hold, or haze any species on the State endangered species list. In 1996, the list included: Eskimo curlew, short-tailed albatross, and humpback, blue, and right whales.

<sup>3</sup> Passive hazing (e.g., balloons, scarecrows, mylar tape) does not require an ADF&G permit.

<sup>4</sup> Includes salvage of dead, oiled wildlife.

<sup>5</sup> A Fish and Wildlife Service (FWS) permit is also needed to haze species managed by FWS that are listed on the Federal endangered species list. As of January 1997, the list included the following Endangered, Threatened, and Candidate Species in Alaska: Alaskan Eskimo Curlew, Aleutian Canada Goose, American Peregrine Falcon, Short-Tailed Albatross, and Spectacled and Steller's Eiders.

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## APPENDIX 17

### EQUIPMENT AND MATERIALS SUGGESTED FOR HAZING KIT: MIGRATORY BIRDS<sup>3</sup>

ITEM	APPROXIMATE RETAIL COST \$	QUANTITY	APPROXIMATE TOTAL COST \$
Frame pack	50.00	1	50.00
First aid kit	10.00	1	10.00
Mylar tape	3.00	5 rolls	15.00
Towels/rags	NA	10	NA
Ear protection	3.00	3	9.00
Eye protection	12.00	3	36.00
Binoculars	33.00 - 200.00	1	75.00
Birds of Alaska Field Book	20.00	1	20.00
<u>System A</u> <sup>4</sup>			
12-Guage shotgun, single shot	200.00 - 600.00	1	300.00
Vinyl gun sleeve	10.00	1	10.00
12-Guage slugs	14.00	1 box of 5	14.00
12-Guage shell crackers	26.30/25	50	53.00
Gun cleaning kit	12.00	1	12.00
<u>System B</u> <sup>2</sup>			
15mm launchers	40.00	2	80.00
6mm caps (.22 caliber)	7.50	200	15.00
15mm screeners (green)	52.50	100	52.50
15mm bangers (red)	52.50	100	52.50
<b>TOTAL ESTIMATED COST FOR KIT</b>			<b>\$804.00</b>

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<sup>3</sup>This information was adapted from a kit prepared by Alaska Clean Seas.

<sup>4</sup>Either system A or B may provide the same net results. Other noise generating devices may also be used if company policy prohibits or restricts the use of firearms.

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## APPENDIX 18

### EQUIPMENT AND MATERIALS REQUIRED FOR CAPTURING AND TREATING OILED WILDLIFE: MIGRATORY BIRDS<sup>1</sup>

ITEM	QUANTITY
<b><u>Bird Capture</u></b> <sup>2</sup>	
Long-handled nets	25
Cardboard boxes (collapsed)	100
Rags/towels	--
Masking tape	25 rolls
Gloves (assorted sizes)	50 pair
Rain gear (assorted sizes)	50 pair
<b><u>Bird Treatment</u></b> <sup>3</sup>	
Turbojector showerheads (with hoses and adapters)	10
Pet dryers	10
Digital gram scale	1
Catheter tip syringes (60 cc)	1 case (100 per case)
Catheters (sizes 8 and 12)	1 case each (100 per case)
Netting (0.5")	100 pounds
Doughboy pools (collapsible)	2
Meat thermometers	10
Digital thermometers (for bird body temperatures)	5
Hard water test kits	2
Record forms	2 reams (500 per ream)
Numbered plastic leg bands (various sizes)	60 packs (100 per package)
Light mineral oil (75-85 viscosity)	50 gallons
Feeding dishes (hard plastic, 8" x 4" x 11")	100
Washing tubs (soft plastic, 14" x 12" x 5")	50
Cardboard pet carriers (20" x 12")	500
Water softeners	2
Garden hose (50')	10
Pedialyte	20 cases
Dawn dish detergent	2 cases
Food processors (industrial)	2

<sup>1</sup> The information in this appendix was obtained from the International Bird Rescue Research Center in Berkeley, California.

<sup>2</sup> This list does not include transportation of bird collectors to the affected area or transportation of birds back to the treatment center. Methods of transportation could include ground vehicles, boats, and fixed- and rotary-wing aircraft.

<sup>3</sup> This list represents the supplies required for treating 1,000 oiled birds during the first week of a bird treatment program. Some of these supplies will be used up with time (i.e., bands, record forms, detergent, and pedialyte) and will need to be replenished. Items that have a short shelf life (such as Trout Chow used in tube feeding) or require freezing (fresh fish) have not been included in this list. These items need to be acquired at the time of the spill. Bulky lumber required for pen construction is usually readily available.

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## APPENDIX 19

### EQUIPMENT AND MATERIALS REQUIRED FOR CAPTURE/STABILIZATION KIT: MIGRATORY BIRDS<sup>1</sup>

CAPTURE/STABILIZATION KITS <sup>2</sup> (25 BIRDS)	EST. RETAIL COST(\$)	QUANTITY	EST. TOTAL COST(\$)
Carry case <sup>3</sup>	52.50	1	52.50
Birds of Alaska Field Book: plastic covered bird identification cards	20.00	1:3	40.00
Binoculars	33.00 – 200.00	1	75.00
First aid kit	10.00	1	10.00
Safety glasses	12.00	10	120.00
Capture form (Appendix 12 of this document) with field clip board	1.79	30	53.70
9" x 18" Cardboard pet carriers (waxed)	6.75	25	168.75
Masking tape (rolls)	3.00	2	6.00
Fish dip nets (various sizes)	8.00 – 40.00	5	100.00
Long rubber fisherman gloves (5 medium size; 5 large size; 5 extra large-size)	6.75 – 20.00	15	150.00
Towels	2.83	12	34.00
Rags (box)	NA	1	NA
King-size pillow cases	4.50	5	22.50
30 gallon-size plastic bags (box of 30)	4.59	1	4.59
Zip-lock plastic bags (box of 300)	2.19	1	2.19
Animal care forms (FWS approved) to record and track fate of birds within care center	NA	50	NA
"Monoject" catheter feeding tubes (size 12FR x 16)	1.14	5	5.70

<b>CAPTURE/STABILIZATION KITS<sup>2</sup> (25 BIRDS)</b>	<b>EST. RETAIL COST(\$)</b>	<b>QUANTITY</b>	<b>EST. TOTAL COST(\$)</b>
"Monojet" syringes with Catheter Tips	18.35/20	25	22.00
Pedialyte or electrolyte solution (1 litre bottle)	4.00	2	8.00
Toxiban (bottle)	2.95	1	2.95
Plastic leg bands – numbers 2-7, 9, 11, 12, 14, 16 (10 each)	.98 - 3.35	10	20.00
Veterinarian wrap (rolls)	2.50	2	5.00
<b>TOTAL ESTIMATED COST OF KIT</b> (Rounded to nearest \$)			<b>\$930.00</b>

<b>ADDITIONAL RAPTOR SUPPLIES</b>	<b>EST. RETAIL COST(\$)</b>	<b>QUANTITY</b>	<b>EST. TOTAL COST(\$)</b>
Heavy leather raptor-handling gloves (pairs)	30.00 -35.00	2	60.00
Leather eagle hoods	20.00 -25.00	3	75.00
Plastic flight kennels (size #400)		3	240.00
<b>TOTAL ESTIMATED COST OF RAPTOR SUPPLIES</b>			<b>\$375.00</b>

1. Parties responding to a spill who wish to initiate a bird hazing program must complete the checklist found in Appendix 24 and submit it to the Federal On-Scene Coordinator.

2. NOTE: Purchase or possession of supplies listed below does not authorize the capture or handling of any birds.

3. Suggested options include a frame pack or a plastic drum that could be used to store oily waste.

## APPENDIX 20

### EQUIPMENT AND MATERIALS REQUIRED FOR CAPTURING AND TREATING OILED WILDLIFE: SEA OTTERS<sup>5</sup>

ADMINISTRATIVE OFFICES	
ITEM	QUANTITY
Desks	9
Folding tables (4')	2
Folding table (6')	1
Coffee	--
Braun coffee maker	1
4-drawer filing cabinets	4
Secretarial chairs on wheels	11
Locking cabinet	1
Copy paper (case, 2' x 2.5' x 3.5')	11
Copy machine	1
Cellular phones	10
Marine radios (handheld)	10

POOL AND TOTE AREA	
ITEM	QUANTITY
High-speed pet dryer	4
Plastic storage containers (24" x 16" x 16.5")	10
Nets and poles	10
Garbage cans	5
Galvanized dust pans	3

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<sup>5</sup> The information in this appendix was obtained from representatives of the International Wildlife Center. This information is for 100 sea otters.

**APPENDIX 20, CONT.**

<b>POOL AND TOTE AREA, CONT.</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Hoses	200
Sump pump	--
Stuff sacks	5
Metal feeding pans	30-40
Shop vacuums	2
Leather gloves	30
Kennels (plastic)	50
Wooden cages	20-30
Maintenance trailer	1
Rubber dog-pull-toys	10
<b>NURSERY EQUIPMENT AND SUPPLIES</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Water bed pen (93.75" x 66.5" x 31" tall)	1
Table (49.5" x 31.5" x 30.0" tall)	1
Feeding bed (78.5" x 42.0" x 14.5" tall)	1
Refrigerator (18.5" x 18" x 33.5" tall)	1
Hamilton Beach blender (7 speed, 12" x 9" x 8")	1
Sink stand (built in, 22.5" x 24" tall)	2
Folding metal chairs	4
Lakewood floor fan (27.5" x 42" tall)	1
Scale (Accu-weigh, 50 lb.)	1
Blow dryer (Conair Elegante, 1600 watt)	3

**APPENDIX 20, CONT.**

<b>NURSERY EQUIPMENT AND SUPPLIES, CONT.</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Blow dryer (Conair Prostyle, 1250 watt)	1
Extra blender pitcher	1
Flashlight (Rayvak work horse)	1
Pet carrier (Sky Kennel)	1
Trash cans (33 gal.)	2
Plastic totes (Rubber Maid, 18 gal.)	5
Plastic tote lids (Rubber Maid)	5
Trash can lids (Rubber Maid)	2
Paper towel rack (plastic wall mount)	1
Rubber floor mats	2
Baby otter retention gate	1
Radio telephone (Johnson)	1
Portable radio (Motorola)	1
Clock (wall-mount Sunbeam)	1
Clipboards	10
Thermometer (wall-mount)	1
Buckets (1 gal.)	10
Sponge floor mop	1
Stethoscope	1
Measuring spoons (set of 5)	1
Squeeze bulb syringe	1
Wooden crab cracking hammers	2

**APPENDIX 20, CONT.**

<b>NURSERY EQUIPMENT AND SUPPLIES, CONT.</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Measuring cups (various sizes)	4
Pet feed bowls	2
Sterile catheters (various sizes, Rob-Nel)	15
Cathetertip syringes (60 cc)	100
Syringes (3 cc)	10
Syringe (1 cc)	1
Carving knives	2
Pitcher (2 qt.)	1
Plastic container (1.5 qt.)	1
Plastic nursing bottles plus nipples (Even-Flo)	2
Disposable bottle inserts (Playtex)	12
Inflatable wading pools	2
Disposable gloves (200 count, Playtex)	1
Permanent markers (Sharpie, extra fine point)	10
Atomizer bottle (1 qt.)	1
Cleaning bucket (3 gal.)	1
Water thermometer	1
Fire extinguisher	1
Hypothermic thermometer	1
Anal thermometers	4
Pet brushes	2
Plastic dishpan (Rubber Maid)	1



**APPENDIX 20, CONT.**

<b>NURSERY EQUIPMENT AND SUPPLIES, CONT.</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Scrub brush (hard bristle)	1
Square plastic equipment holders	2
Disinfectant (Atomizer, 1 qt.)	1
Extension cord (heavy duty, 50')	1
Daily husbandry forms	100
Diet chart forms	100
Weight chart forms	10
Formula-making protocol	2
Protocol and information packet	2
Daily husbandry summary forms	50
Legal pads (yellow, 50 count)	10
Post-it note pads (100 count)	12
Ballpoint pens (black and blue)	12
Stool-sample collection containers	10
Paper towels (rolls)	10
Betadine surgical scrub (16 oz.)	2
Dish soap (Dawn, 20 fl. oz.)	1
Nolvasan (gal. bottles)	2
Alpha-Keri moisturizer (8 oz. Bottle)	1
DeClor-It (gal. bottle)	1
DeClor-It (6 oz. bottle)	1
Enemas (Fleet, ready-to-use)	3

**APPENDIX 20, CONT.**

<b>NURSERY EQUIPMENT AND SUPPLIES, CONT.</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Cod Liver oil (8 oz. bottles)	3
EVSCO Hi-Vite drops (2 oz. Bottle)	2
Nutri-Cal (tubes)	2
Kaopetate (8 oz. bottle)	1
Probiocin (10 gm., 12 ml. tube)	1
STAT-vme (16 oz. bottles)	3
Thiamine Tabs-Lilly (50 count bottle)	1
B-Complex Tabs Hi Health (100 count bottle)	1
Saffola-Sunflower oil (24 oz. Bottle)	1
Bedad solution (4 oz. bottle)	1
Maury Liver Iron B-Complex Injectable (bottle)	1
K-Y Jelly (tube)	1
Coopers Tribriksen 48%-100ml Injectable (bottle)	1
Pedialyte (32 fl. oz. bottles)	24
Half-and-Half (pints)	12
PetCal tabs (60 tab. bottle)	2
I.V. Sodium Chloride (0.9%, 1,000 ml.)	2
I.V. Lactated Ringers (1,000 ml.)	10
I.V. 5% Dextrose (1,000 ml.)	10
I.V. 50% Dextrose (1,000 ml.)	10
I.V. Lactated Ringers to 5% Dextrose (1,000 ml.)	10

**APPENDIX 20, CONT.**

<b>FOOD PREPARATION</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Plastic cutting boards (15" x 36")	3
Sharpening stone	1
Sharpening steel	1
Fillet knives (9")	5
Scale (10 lb.)	2
Scale (5 lb.)	2
Plastic dish totes (18" x 12" x 5")	20
Plastic dish totes (24" x 12" x 18")	10
Plastic garbage cans	5
Floor squeegees	2
Plastic ice scoops	2
Sheet rock hammers	5
Plastic totes (18 " x 25" x 15" with lids)	20
Plastic totes (24" x 16" x 9")	20
Plastic totes (21" x 17" x 7")	20
Large plastic totes with lids	20
Rubber mats	4
Broom (push kind)	2
Cabinets (4-shelf)	2
Wall clock	1
First aid kit	1
Refrigerators	4

**APPENDIX 20, CONT.**

<b>FOOD PREPARATION, CONT.</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Upright freezer	2
Wall fire extinguisher	2
Floor model fire extinguisher	1
Table (4'6" x 2'6")	1
Wooden benches	2
<b>CLEANING ROOM</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Water heaters (instantaneous propane)	3
Wash tables (with associated hose set-ups)	3
Wall clock	1
Shelves	4
Trash can (33 gal.)	4
Stuff bag	4
Shop vacuum	1
Floor squeegee	2

<b>SANITATION SUPPLIES</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Clorox (gallon size)	16
Nolvasan (gallon size)	16
Dawn dish detergent (quart size)	16
Towels (24" x 24" x 24", boxes)	200

**APPENDIX 20, CONT.**

<b>TOOLS</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Mops (with strainers and buckets)	3
Hammer	1
Utility knife (with extra blades)	1
Locks with keys	2
Phillips screw driver	1
Standard screw driver	1
Grey duct tape (case)	1
Heavy-gauge contaminated waste bags (rolls)	2
Black felt tip pens (box)	1
Red felt tip pens (box)	1
Mop heads	3
Garbage containers with lids (24" x 16" x 16", Rubber Maid)	6
Garbage containers (33 gal., Rubber Maid)	2
Fish totes with lids (44" x 48" x 36")	4
Cage cleaning station	1
Heavy steel mesh screens (0.25" mesh)	4
Conex van (20')	1

**APPENDIX 20, CONT.**

<b>MEDICAL SUPPORT AND VET CLINIC</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Exam tables	2
Desk	1
Table	1
Utility sink	1
Microwave	1
Clock	1
Stools	3
Tracheal tubes (assorted sizes)	20
Syringes (assorted sizes)	5 boxes
Needles (assorted sizes)	5 boxes
Surgical gloves (assorted sizes)	200
Exam gloves (assorted sizes)	200
Tape	--
Feeding tubes	20
Catheters (assorted sizes)	20
I.V. lines	50
<b>CLEANING EQUIPMENT</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Dishwashing detergent (Dawn)	50 liters
Plastic buckets (5 gal.)	8
Garden hose (100')	6
Pet spray nozzles	6
High-speed pet dryer	6

**APPENDIX 20, CONT.**

<b>HUSBANDRY EQUIPMENT</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Dip nets (salmon)	5
Net (8' x 8', large mesh)	5
Stuff bags	6
Scale (200 lb., stationary)	1
Scale (200 lb., hanging)	1
Identification tags	--
Record forms (package)	1
Space heaters	4
Room thermometers	4
Extension cords (100')	10
Portable lights and stands	5
Garbage cans (large)	6
Refrigerator	1
Vacuum (Wet/Dry)	1
Aprons (plastic)	30
Gloves (leather, welders)	8
Dog brushes	24
Towels (old and clean)	--
File cabinet (2 drawer)	2
File folders (package)	5
Clipboard	10

**APPENDIX 20, CONT.**

<b>NECROPSY KIT</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Body bags (large)	100
Body bags (small)	100
Bard Parker handle	1
Stainless steel pan (12" x 7" x 2")	1
Large disposable scissors	1
Bandage scissors (7.5")	1
Bone cutters	1
Boning knife	1
Skinning knife	1
Aluminum foil (roll)	10
Thumb forceps	1
Formalin (gal.)	2
Disposable gloves	100
Fishing box	1



**APPENDIX 20, CONT.**

<b>VETERINARY SUPPLIES</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Demerol (30 cc, bottles)	15
Valium (20 cc, bottles)	5
Naloxone (Narcan, vials)	120
Saline (1 l. bags)	100
Sodium bicarbonate (100 ml., bottles)	15
Fluids, Lactated Ringers and 5% Dextrose (liter)	100
Tuberculin syringes (1 cc, box)	10
Syringe (3 cc with 20 gauge, needle, box)	10
Syringe (12 cc, box)	10
Needle (20 x 1", box)	10
Needle (18 x 1.5 box)	10
Catheters (18 gauge, 2" angiocath, box)	10
Venous sets	20
Stethoscope, Littman pediatric	5
Rectal temperature probe (Yellow Springs Instrument)	5
Intratracheal tubes (#7)	20
Intratracheal tubes (#8)	20
Culturettes (box)	5
Blood tubes (R, box)	10
Blood tubes (R, P&G, box)	10
Antibiotics, Liquamicin (LA 200, 500 ml., bottle)	5
Antibiotics, Tribrissen 48% (100 ml., bottle)	5

**APPENDIX 20, CONT.**

<b>VETERINARY SUPPLIES, CONT.</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Dexamethazone (bottle)	6
Dypyrone (bottle)	6
Ophthalmic ointment (dozen)	4
Ophthalmic lubricant, Dacriose (1 oz., dozen)	4
Ophthalmic drops, gentocin durafilm (dozen)	4
Vitamins, B-complex, liver, iron (bottle)	6
Vitamins, Hivite drops (dozen)	2
Diaglow (dozen)	2
Multitest sticks (UA, bottle)	2
Disinfectant, Roccal D (gal.)	4
Vetrap, 2" (dozen)	1
Neopectasol (gal.)	2
Atropine Sulfate (100 cc, bottle)	2
Panalog cream (15 cc, dozen)	2
Euthanol (100 cc, bottle)	6

**APPENDIX 20, CONT.**

<b>OPTIONAL EQUIPMENT</b>	
<b>ITEM</b>	<b>QUANTITY</b>
<b>SURGERY EQUIPMENT AND SUPPLIES</b>	
Stainless steel pan (8" x 5" x 2")	1
Needle holder (5.5 Olsen/Hegar)	1
Towel clamps (3.5 Backhaus)	4
Scalpel handle (Bard Parker)	1
Allis tissue clamps	4
Hemostat (Mosquito, straight)	6
Hemostat (Mosquito, curved)	6
Scissors (S/B 5.5, curved)	1
Scissors (S/B 5.5, straight)	1
Thumb forceps (2-3, each)	1
Forceps (Kelly, straight)	2
Forceps (Kelly, curved)	2
Forceps (Rochester Carmalt)	2
Forceps (Rochester Pean)	2
Needles (assorted, dozen)	4
Blades (#10 and #11, each, package)	1
Sutures (Vicryl 2-0, box)	1
Suture ( S.S. wire #2,3,4 each, package)	1
Suture (Braunamid 2-0, package)	2
KY Jelly (tube)	24
Betadine solution (gal.)	2

**APPENDIX 20, CONT.**

<b>OPTIONAL EQUIPMENT, CONT.</b>	
<b>ITEM</b>	<b>QUANTITY</b>
<b>SURGERY EQUIPMENT AND SUPPLIES, CONT.</b>	
Comb	2
Disposable drapes (dozen)	2
Gloves (size 7.5 and 8, each, box)	1
Surgical cap (box)	2
O.R. mask (box)	2
Instracal (sterilizing liquid, gal.)	1
I.V. fluid stand	4
Surgical sponges (3 x 3, case)	4
Cotton swabs (box)	

<b>ANESTHETIC EQUIPMENT</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Small animal anesthetic machine (Acoma model FO-206 or Halothane vaporizer)	1
Endotracheal tube (#6 and 7, each)	6
Esophageal stethoscope	1
Oxygen & Nitrous oxide (if possible)	

**APPENDIX 20, CONT.**

<b>ORDER, IF NEEDED</b>	
<b>ITEM</b>	<b>QUANTITY</b>
Fentanyl	--
NAC1 (1,000 ml.)	--
50% Dextrose (500 ml.)	--
Novalsan Solution	--
5% Dextrose (1 l. bottles)	--
HiVite Drops (pups only)	--
Nutrical	--
Probioci (pups only)	--
STAT	--
B+2	--
Gluko Stix (Dipstick glucose)	--
B.U.N. Stick (B.U.D. dipstick)	--
Exam gloves (vinyl latex)	--
Long acting Penicillin	--
Amoxicillin (200 mg. and 400 mg.)	--
Lacri lube oph. ointment	--
Needles (18 gauge x 1.5")	--
Needles (20 gauge x 1.5")	--
Needles (18 gauge x 1")	--
Droncit	--
Iron Dextran	--
Pedialyte	--

**APPENDIX 20, CONT.**

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## APPENDIX 21

### ENTITIES IN ALASKA WITH EQUIPMENT AND MATERIALS STOCKPILED FOR DETERRING UNOILED WILDLIFE AND CAPTURING AND TREATING OILED WILDLIFE<sup>a</sup>

LOCATION IN ALASKA	WILDLIFE SPECIES/RESPONSE ACTION	AMOUNT OF SUPPLIES	TOTAL ANIMALS TO BE ASSISTED WITH SUPPLIES	SUPPLY OWNER/CONTACT PERSON/24-HOUR CONTACT NUMBER
Deadhorse	Bird hazing	10 kits	Birds at multiple locations	<b>Bruce Metcalfe</b> Alaska Clean Seas (ACS) 659-3207 (ph)
	Bird capture/field stabilization	10 kits	100 birds	
	Bird stabilization	1 module <sup>b</sup>	350 birds	
	Bear stabilization and treatment <sup>c</sup>	1 unit	5 polar bears	
Pump Station #1 (Prudhoe Bay)     Pump Station #8 (Mile 34, Richardson Highway, Johnson Road)	Bird hazing	2 kits	Birds at 2 onshore locations	<b>Kate Montgomery</b> Alyeska Pipeline Services Company (Alyesak) 659-2437 or 278-161, ext.4184 (ph)
	Bird stabilization	2 kits	150 birds	
	Bird capture	5 kits	50 birds	
	Bird hazing	2 kits	Birds at 2 onshore locations	<b>Bruce McKenzie</b> or <b>Max Shoulders</b> Alyeska 459-7821 (ph)
	Bird stabilization	2 kits	150	
	Bird capture	5 kits	50	
	Bird stabilization	1 module <sup>b</sup>	Pass-through facility	

## APPENDIX 21, CONT.

LOCATION IN ALASKA	WILDLIFE SPECIES/RESPONSE ACTION	AMOUNT OF SUPPLIES	TOTAL ANIMALS TO BE ASSISTED WITH SUPPLIES	SUPPLY OWNER/CONTACT PERSON/24-HOUR CONTACT NUMBER
Valdez (Valdez Terminal and SERVS Annex)	Bird hazing	4 kits	Birds at 4 onshore locations	<b>Phil Koszarek</b> or <b>SERVS Duty Officer</b> Alyeska 835-6901 (ph)
	Breco hazing buoy	1 buoy	Seabirds	
	Bird stabilization	4 kits	300 birds	
	Bird stabilization	1 module <sup>b</sup>	Pass-through facility	
	Bird capture	40 kits	400 birds	
	Sea otter capture	4 kits	40 sea otters	
	Sea otter stabilization	2 modules	100 sea otters	
	Sea otter treatment	1 complete facility	100 sea otters	
Anchorage	Bird treatment	Complete facility	500 birds	<b>Jay Holcomb</b> International Bird Rescue Research Center 510-841-9086 (ph) or <b>Dave Trudgen</b> Alyeska 265-8174 (ph)
Anchorage	Bird treatment	1 mobile trailer pass through facility	150 birds	<b>Scott McEwen</b> Alaska Chadux Corp. (ACC) 762-3348 (ph) or <b>Jim Styers</b> Wildlife Rapid Response Team (WRRT) 800-204-5686 (pager)



# APPENDIX 21, CONT.

LOCATION IN ALASKA	WILDLIFE SPECIES/RESPONSE ACTION	AMOUNT OF SUPPLIES	TOTAL ANIMALS TO BE ASSISTED WITH SUPPLIES	SUPPLY OWNER/CONTACT PERSON/24-HOUR CONTACT NUMBER
Anchorage	Bird stabilization	2 stabilization kits	100 birds	<b>Dean Looney</b> Navy Supsalv 348-2963 (ph) or <b>Jim Styers</b> WRRT 800-204-5686 (pager)
Anchorage	Sea otter capture	2 capture kits	26 sea otters (capture and holding) <sup>c</sup>	<b>Scott McEwen</b> ACC 762-3348 (ph) or <b>Jim Styers</b> WRRT 800-204-5686 (pager)
	Sea otter holding	2 transportable floating pens	26 sea otters	
Anchorage	Sea otter capture	2 capture kits	26 sea otters (capture and holding) <sup>c</sup>	<b>Dean Looney</b> Navy Supsalv 348-2963 (ph) or <b>Jim Styers</b> WRRT 800-204-5686 (pager)
	Sea otter holding	2 transportable floating pens	26 sea otters	
Homer	Bird hazing	3 kits	Birds at 3 onshore locations	<b>Charlotte Adamson</b> Marine Wildlife Rescue (MWR) 235-2700 or 235-2725 (ph)
	Bird capture	5 kits	250 birds	
	Bird stabilization	1 center	250 birds	

## APPENDIX 21, CONT.

LOCATION IN ALASKA	WILDLIFE SPECIES/RESPONSE ACTION	AMOUNT OF SUPPLIES	TOTAL ANIMALS TO BE ASSISTED WITH SUPPLIES	SUPPLY OWNER/CONTACT PERSON/24-HOUR CONTACT NUMBER
Nikiski (Mile 26.5 North Spur Road)	Bird hazing	3 kits	Birds at 3 onshore locations	<b>Doug Lentsch</b> CISPRI 776-5129 (ph)
	Bird capture	5 kits	250 birds	or
	Sea otter capture	4 kits	52 sea otters (capture and holding) <sup>c</sup>	<b>Jim Styers</b> (sea otters) WRRT 800-204-5686 (pager)
	Sea otter holding	4 transportable floating pens	52 sea otters	
Nikiski or Anchorage	Sea otter treatment	Complete transportable facility under design and construction	120 sea otters	<b>Doug Lentsch</b> CISPRI 776-5129 (ph) or <b>Jim Styers</b> WRRT 800-204-5686 (pager)
Ketchikan, Sitka, Juneau, Petersburg, Skagway, Craig/Klawock	Bird hazing	1 kit per each location	Birds at onshore locations	<b>Jim Annicelli</b> or <b>Sandra Jackson</b> SEAPRO 225-7002 (ph)

<sup>a</sup> Information in this appendix was provided by representatives of the oil industry and their wildlife response contractors. The information has not been verified by wildlife trustee resource agencies. The appearance of wildlife response information in this appendix does not constitute compliance by oil spill contingency plan holders with state oil spill contingency planning requirements.

<sup>b</sup> Module may be transported by Hercules L-100 or C-130 aircraft.

<sup>c</sup> Additional sea otters could be captured in a pre-emptive capture and release program.

**APPENDIX 22**  
**FACILITY REQUIREMENTS FOR OILED WILDLIFE TREATMENT:**  
**MIGRATORY BIRDS<sup>1</sup>**

One large central room (preferably gymnasium size) - to house and treat oiled birds.<sup>2</sup>

Unlimited quantities of hot water (102° F to 110° F) - to clean birds; 50 to 100 gallons of water may be required for each bird.

Means to dispose of used cleaning solution and rinse water - e.g., sink or shower drains to sewer system or storage tanks for disposal.

Means to dispose of medical and solid oily wastes - e.g., units for storage and transport of used syringes, and oiled cleaning rags, bedding, and transport boxes to approved disposal facilities.

Good ventilation - to prevent excessive oil fumes and humidity and help prevent diseases.

Temperature control - to maintain a draft free, warm environment (75° F to 85° F).

Electrical capability - minimum 200 amps., 120/240 volts, single-phase service and (if possible) ground-fault interrupts.

Communication system - at least one telephone line or other form of communication located away from wildlife and cleaning activities.

One or more small rooms - to serve as functional areas, including but not limited to, an office/command post, area for medical procedures, isolation area for diseased birds, volunteer rest area/lounge, and storage.<sup>3</sup>

An adjacent outdoor area/campground - for storing equipment and conducting activities such as preparing birds for release.<sup>4</sup>

<sup>1</sup>The information in the appendix was obtained from the International Bird Rescue Research Center in Berkeley, California.

<sup>2</sup>The wash/rinse area should be a minimum of 40' by 20'; the food preparation area should be a minimum of 20' by 10'. The holding area must be a minimum of 50' by 50' for each 100 birds.

<sup>3</sup>Each indoor area should be at least 20' by 20'. The outdoor area (which may need to hold at least 4 pools with individual dimensions of 15' by 10') should be at least 60' by 60'.

<sup>4</sup>The storage area could be a shed set up in the yard of the facility.

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## APPENDIX 23

### PRELIMINARY GUIDANCE FOR FACILITY REQUIREMENTS FOR OILED WILDLIFE TREATMENT: SEA OTTERS<sup>1</sup>

#### General Requirements that Must Be Addressed:

- Veterinary hygiene standards must be applied to prevent the transmission of communicable wildlife diseases.
- Transportation of sea otters from the capture site to the treatment facility and to the holding facilities must be minimal.
- The number of sea otters in any holding facility (meeting the minimum requirements for space) should contain no more than 25 animals.
- Approved training needs to be provided by the plan holder or a wildlife contractor for the professionals and volunteers who will be staffing the facilities.

#### Treatment Facility Requirements Must Establish Areas for:

- Triage
- Quarantine
- Cleaning<sup>2</sup> and drying
- Holding pens with pools
- Veterinary clinic
- Pathology laboratory
- Food preparation
- Pup nursery
- Morgue
- Administration
- Staff accommodations

<sup>1</sup>This information is provided by the Fish and Wildlife Service (FWS), Oil and Hazardous Substances Spill Response Program (October 1993).

<sup>2</sup>The number of cleaning stations should be based on the numbers of animals required by the planning standards and the estimates of washing and drying time needed to adequately complete the process.

## APPENDIX 23, CONT.

### Holding Facility Requirements Must Address:

- Holding pens
- Food preparation
- Veterinary monitoring
- Administration
- Staff accommodations

NOTE: Facilities, equipment, sea otter response plans, training and staffing qualifications must be approved by FWS. FWS personnel evaluation for approval will include the "adequate" performance of the plan holder during an oil spill drill or during a practice drill designed to specifically test the response plan.

Approved training needs to be provided by the plan holder or a wildlife contractor for the professionals and volunteers who will be staffing the facilities.

## APPENDIX 24

### OIL SPILL RESPONSE CHECKLIST: WILDLIFE HAZING

Responders who do not have pre-authorization to haze wildlife as part of a spill response must receive authorization from the Federal On-Scene Coordinator (OSC) and appropriate wildlife resource agencies; i.e., Fish and Wildlife Service, National Marine Fisheries Service, and Alaska Department of Fish and Game prior to initiating hazing activities. Responders may apply for authorization to haze wildlife by completing Sections I-V of this form and submitting it to the Federal OSC and appropriate wildlife resource agency representatives.

Responders who do not have pre-authorization to haze wildlife should note that completing the requested information on this checklist does not satisfy wildlife resource agencies permitting requirements. However, the information contained in the completed checklist should provide wildlife resource agencies with the necessary information for determining whether or not it is appropriate to issue requested permits.

Responders who have pre-authorization to conduct wildlife hazing and who choose to initiate a hazing program should (1) follow the terms of their permit, and (2) complete Sections I-V of this checklist and submit it to the Federal OSC and appropriate wildlife resource agency representatives within 24-hours following the initiation of a wildlife hazing program.

I. SPILL DATA	
A.	Name of incident: _____
B.	Date of incident: _____
C.	Spill location: _____ latitude; _____ longitude _____
D.	Spill location: land _____; water _____; land and water _____
E.	Distance to nearest water body, if on land: _____ km/mi
F.	Product released: North Slope Crude _____; Diesel #2 _____; Cook Inlet Crude _____; Chevron Residual _____; JP4 _____; Other _____
G.	Estimated volume of product released: _____ gals/bbls
H.	Release status: Stopped _____; Continuing _____; Unknown _____
I.	Is spill: Contained _____; Spreading _____; Unknown _____
J.	Estimated volume of product potentially released: _____ gals/bbls

**APPENDIX 24, CONT.**

<b>II. WILDLIFE DATA</b>				
<b>SPECIES/SPECIES GROUPS</b>	<b>ESTIMATED NUMBERS OF WILDLIFE AT RISK</b>			
	0	1-100	101-1000	>1000
Waterfowl				
Seabirds				
Shorebirds				
Raptors				
Sea otters				
Seals				
Walrus				
Sea lions				
Whales				
Polar bears				
Black/brown bears				
Hoofed animals				
Furbearers				
Other terrestrial mammals				

**NOTE: Circle all estimates that are based on field observations since the spill.**



**III. PRIMARY RESPONSE ACTIONS**

Describe any wildlife response actions underway or previously taken for removal of oily food sources and/or deployment of boom to protect important habitats:

**APPENDIX 24, CONT.**

**IV. SECONDARY RESPONSE ACTIONS: HAZING**

- A. Describe hazing plan for each species or species group identified in Section II, including objectives, procedures, equipment, number of persons, and location(s):

- B. Information on Person in Charge of Hazing

Name:

Affiliation:

Address:

Qualifications:

Telephone number:

Fax number:

- C. Information on Hazing Permittee (if different from Section IV.B above)

Permittee:

Affiliation:

Address:

Telephone number:

Fax number:

**V. REQUESTOR SIGN-OFF**

Signature of requestor:

Printed name of requestor:

Title of requestor:

Requestor affiliation:

Requestor representing:

Time and Date Request Submitted to Federal On-Scene Coordinator:

**NOTE: SECTIONS I-V NEED TO BE SUBMITTED TO THE FEDERAL ON-  
SCENE COORDINATOR AND APPROPRIATE WILDLIFE RESOURCE  
AGENCY REPRESENTATIVES**

## **FAX COVER SHEET**

**FROM: FEDERAL ON-SCENE COORDINATOR**

**Telephone:** \_\_\_\_\_ **FAX Number:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**No. Pages to Follow:** \_\_\_\_\_ **Originator:** \_\_\_\_\_

**TO: THE FOLLOWING WILDLIFE RESOURCE AGENCY REPRESENTATIVES  
(Check Appropriate Boxes):**

**FISH AND WILDLIFE SERVICE:**

☐ Catherine Berg  
Fax: 786-3350  
Wk: 786-3598  
Hm: 694-7379  
Pager: 800-759-8888, Pin 5072270

**(ALTERNATES LISTED BELOW)**

☐ Phillip Johnson  
Fax: 786-3350  
Wk: 786-3483  
Hm: 345-0300  
Pager: 800-759-8888, Pin 1259849

**NATIONAL MARINE FISHERIES SERVICE:**

☐ Brad Smith  
Fax: 271-3030  
Wk: 271-5006  
Hm: 248-4211

☐ Kaja Brix  
Fax: 586-7012  
Wk: 586-7235  
Hm: 586-1637

**ALASKA DEPARTMENT OF FISH AND GAME:**

☐ Mark Fink  
Fax: 267-2464  
Wk: 267-2338  
Hm: 337-7933

☐ Jack Winters  
Fax: 456-3091  
Wk: 459-7285  
Hm: 479-2320

*The Federal On-Scene Coordinator has received the attached "Oil Spill Response Checklist: Wildlife Hazing". As a representative of an agency with regulatory responsibility for wildlife species affected by the proposed response program, you are requested to complete Section VI of the checklist. **Your decision should be transmitted AS SOON AS POSSIBLE via FAX to the Federal On-Scene Coordinator, Attention** \_\_\_\_\_.*

**YOUR RECOMMENDATION/DECISION REGARDING THIS REQUEST IS  
TIME SENSITIVE.**

APPENDIX 24, CONT.

**VI. WILDLIFE RESOURCE AGENCY RESPONSE TO REQUEST**

A. Date and time request received by wildlife resource agency representative(s):

**Alaska Department of Fish and Game (ADF&G)**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Time: \_\_\_\_\_ Phone #: \_\_\_\_\_

**Fish and Wildlife Service (FWS)**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Time: \_\_\_\_\_ Phone #: \_\_\_\_\_

**National Marine Fisheries Service (NMFS)**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Time: \_\_\_\_\_ Phone #: \_\_\_\_\_

B. **ADF&G Recommendation/Decision:**

\_\_\_\_ Approve requested program(s) as proposed

\_\_\_\_ Approve requested program(s) with the following conditions:

\_\_\_\_ Deny requested program(s)

Signature: \_\_\_\_\_ Time: \_\_\_\_\_

Date: \_\_\_\_\_

C. **FWS Recommendation/Decision:**

\_\_\_\_ Approve requested program(s) as proposed

\_\_\_\_ Approve requested program(s) with the following conditions:

\_\_\_\_ Deny requested program(s)

Signature: \_\_\_\_\_ Time: \_\_\_\_\_

Date: \_\_\_\_\_

D. **NMFS Recommendation/Decision:**

\_\_\_\_ Approve requested program(s) as proposed

\_\_\_\_ Approve requested program(s) with the following conditions:

\_\_\_\_ Deny requested program(s)

Signature: \_\_\_\_\_ Time: \_\_\_\_\_

Date: \_\_\_\_\_

**APPENDIX 24, CONT.**

**VII. FEDERAL AND STATE ON-SCENE COORDINATOR RESPONSE TO REQUEST**

**A. State On-Scene Coordinator's decision regarding wildlife response program:**

Request received by State On-Scene Coordinator:

Time: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_ Concur with wildlife resource agencies

\_\_\_\_ Concur with attached conditions

\_\_\_\_ Do not concur

Signature: \_\_\_\_\_ Time: \_\_\_\_\_

Date: \_\_\_\_\_

**B. Federal On-Scene Coordinator's decision regarding response program:**

Request received by Federal On-Scene Coordinator:

Time: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_ Concur with wildlife resource agencies

\_\_\_\_ Concur with attached conditions

\_\_\_\_ Do not concur

Signature: \_\_\_\_\_ Time: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX 25

### OIL SPILL RESPONSE CHECKLIST: WILDLIFE CAPTURE, TRANSPORTATION, STABILIZATION, AND TREATMENT

Responders who do not have pre-authorization to capture, transport, stabilize, or treat wildlife as part of a spill response must receive authorization from the Federal On-Scene Coordinator (OSC) and appropriate wildlife resource agencies; i.e., Fish and Wildlife Service, National Marine Fisheries Service, and Alaska Department of Fish and Game prior to initiating those activities. Responders may apply for authorization to capture, transport, stabilize, and/or treat oiled wildlife by completing Sections I-VIII of this form and submitting it to the Federal OSC and appropriate wildlife resource agency representatives.

Responders who do not have pre-authorization for wildlife capture, transportation, stabilization, or treatment should note that completing the requested information on this checklist does not satisfy wildlife resource agencies permitting requirements. However, the information contained in the completed checklist should provide wildlife resource agencies with the necessary information for determining whether or not it is appropriate to issue requested permits.

Responders who have pre-authorization for wildlife capture, transportation, stabilization, or treatment and who choose to initiate one or more of those activities should (1) follow the terms of their permit, and (2) complete Sections I-VIII of this checklist and submit it to the Federal OSC and appropriate wildlife resource agency representatives within 24-hours following the initiation of those activities.

<b>I. SPILL DATA</b>	
A.	Name of incident: _____
B.	Date of incident: _____
C.	Spill location: _____ latitude; _____ longitude
D.	Spill location: land _____; water _____; land and water _____
E.	Distance to nearest water body, if on land: _____ km/mi
F.	Product released: North Slope Crude _____; Diesel #2 _____; Cook Inlet Crude _____; Chevron Residual _____; JP4 _____; Other _____
G.	Estimated volume of product released: _____ gals/bbls
H.	Release status: Stopped _____; Continuing _____; Unknown _____
I.	Is spill: Contained _____; Spreading _____; Unknown _____
J.	Estimated volume of product potentially released: _____ gals/bbls

**APPENDIX 25, CONT.**

<b>II. WILDLIFE DATA</b>				
<b>SPECIES/SPECIES GROUPS</b>	<b>ESTIMATED NUMBERS OF WILDLIFE AT RISK</b>			
	0	1-100	101-1000	>1000
Waterfowl				
Seabirds				
Shorebirds				
Raptors				
Sea otters				
Seals				
Walrus				
Sea lions				
Whales				
Polar bears				
Black/brown bears				
Hoofed animals				
Furbearers				
Other terrestrial mammals				

**NOTE: Circle all estimates that are based on field observations since the spill.**

[Approved 1/22/97 by Alaska RRT; contacts updated 10/30/98]



**APPENDIX 25, CONT.**

**III. PRIMARY RESPONSE ACTIONS**

Describe any wildlife response actions underway or previously taken for removal of oily food sources and/or deployment of boom to protect important habitats:

**APPENDIX 25, CONT.**

**IV. SECONDARY RESPONSE ACTIONS: PRE-EMPTIVE CAPTURE**

- A. Describe pre-emptive capture plan for each species or species group identified in Section II, including objectives, procedures, equipment, number of persons, and location(s):

- B. Information on Person in Charge of Pre-emptive Capture

Name:

Affiliation:

Address:

Qualifications:

Telephone number:

Fax number:

- C. Information on Pre-emptive Capture Permittee (if different from Section IV.B above)

Permittee:

Affiliation:

Address:

Telephone number:

Fax number:

**APPENDIX 25, CONT.**

**V. TERTIARY RESPONSE ACTIONS: CAPTURE AND TRANSPORTATION**

- A. Describe capture, collection, and transportation plan for each species or species group identified in Section II, including objectives, procedures, equipment, number of persons, and location(s):

- B. Information on Person in Charge of Capture and Transportation

Name:

Affiliation:

Address:

Qualifications:

Telephone number:

Fax number:

- C. Information on Capture and Transportation Permittee (if different from Section IV.B above)

Permittee:

Affiliation:

Address:

Telephone number:

Fax number:

**APPENDIX 25, CONT.**

<b>VI. TERTIARY RESPONSE ACTIONS: STABILIZATION</b>	
A.	Describe stabilization plan for each species or species group identified in Section II, including objectives, procedures, equipment, number of persons, and location(s):
B.	Information on Stabilization Facility  Address:  Specific location (if not discernible from address):  Telephone number:  Fax number:
C.	Information on Person in Charge of Stabilization  Name:  Affiliation:  Address:  Qualifications:  Telephone number:  Fax number:
D.	Information on Stabilization Permittee (if different from Section IV.B above)  Permittee:  Affiliation:  Address:  Telephone number:  Fax number:

**APPENDIX 25, CONT.**

**VII. TERTIARY RESPONSE ACTIONS: TREATMENT**

A. Describe treatment plan for each species or species group identified in Section II, including objectives, procedures, equipment, number of persons, and location(s):

B. Information on Treatment Facility

Address:

Specific location (if not discernible from address):

Telephone number:

Fax number:

C. Information on Person in Charge of Treatment

Name:

Affiliation:

Address:

Qualifications:

Telephone number:

Fax number:

D. Information on Treatment Permittee (if different from Section IV.B above)

Permittee:

Affiliation:

Address:

Telephone number:

Fax number:

**APPENDIX 25, CONT.**

**VIII. REQUESTOR SIGN-OFF**

Signature of requestor:

Printed name of requestor:

Title of requestor:

Requestor affiliation:

Requestor representing:

Time and Date Request Submitted to Federal On-Scene

Coordinator:

**NOTE: SECTIONS I-VIII NEED TO BE SUBMITTED TO THE FEDERAL  
ON-SCENE COORDINATOR AND APPROPRIATE WILDLIFE RESOURCE  
AGENCY REPRESENTATIVES**

## **FAX COVER SHEET**

**FROM: FEDERAL ON-SCENE COORDINATOR**

**Telephone:** \_\_\_\_\_ **FAX Number:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**No. Pages to Follow:** \_\_\_\_\_ **Originator:** \_\_\_\_\_

**TO: THE FOLLOWING WILDLIFE RESOURCE AGENCY REPRESENTATIVES**  
**(Check Appropriate Boxes):**

**FISH AND WILDLIFE SERVICE:**

☐ Catherine Berg  
Fax: 786-3350  
Wk: 786-3598  
Hm: 694-7379  
Pager: 800-759-8888, Pin 5072270

**(ALTERNATES LISTED BELOW)**

☐ Phillip Johnson  
Fax: 786-3550  
Wk: 786-3483  
Hm: 345-0300  
Pager: 800-759-8888, Pin 1259849

**NATIONAL MARINE FISHERIES SERVICE:**

☐ Brad Smith  
Fax: 271-3030  
Wk: 271-5006  
Hm: 248-4211

☐ Kaja Brix  
Fax: 586-7012  
Wk: 586-7235  
Hm: 586-1637

**ALASKA DEPARTMENT OF FISH AND GAME:**

☐ Mark Fink  
Fax: 267-2464  
Wk: 267-2338  
Hm: 337-7933

☐ Jack Winters  
Fax: 456-3091  
Wk: 459-7285  
Hm: 479-2320

*The Federal On-Scene Coordinator has received the attached "Oil Spill Response Checklist: Wildlife Capture, Transportation, Stabilization, and Treatment". As a representative of an agency with regulatory responsibility for wildlife species affected by the proposed response program, you are requested to complete Section VI of the checklist. **Your decision should be transmitted AS SOON AS POSSIBLE via FAX to the Federal On-Scene Coordinator, Attention** \_\_\_\_\_.*

**YOUR RECOMMENDATION/DECISION REGARDING THIS REQUEST IS  
TIME SENSITIVE.**

APPENDIX 25, CONT.

IX. WILDLIFE RESOURCE AGENCY RESPONSE TO REQUEST	
A.	<p>Date and time request received by wildlife resource agency representative(s):</p> <p><b>Alaska Department of Fish and Game (ADF&amp;G)</b></p> <p>Name: _____ Date: _____</p> <p>Time: _____ Phone #: _____</p> <p><b>Fish and Wildlife Service (FWS)</b></p> <p>Name: _____ Date: _____</p> <p>Time: _____ Phone #: _____</p> <p><b>National Marine Fisheries Service (NMFS)</b></p> <p>Name: _____ Date: _____</p> <p>Time: _____ Phone #: _____</p>
B.	<p><b>ADF&amp;G Recommendation/Decision:</b></p> <p>____ Approve requested program(s) as proposed</p> <p>____ Approve requested program(s) with the following conditions:</p> <p>____ Deny requested program(s)</p> <p>Signature: _____ Time: _____</p> <p>Date: _____</p>
C.	<p><b>FWS Recommendation/Decision:</b></p> <p>____ Approve requested program(s) as proposed</p> <p>____ Approve requested program(s) with the following conditions:</p> <p>____ Deny requested program(s)</p> <p>Signature: _____ Time: _____</p> <p>Date: _____</p>
D.	<p><b>NMFS Recommendation/Decision:</b></p> <p>____ Approve requested program(s) as proposed</p> <p>____ Approve requested program(s) with the following conditions:</p> <p>____ Deny requested program(s)</p> <p>Signature: _____ Time: _____</p> <p>Date: _____</p>



**APPENDIX 25, CONT.**

**X. FEDERAL AND STATE ON-SCENE COORDINATOR RESPONSE TO REQUEST**

**A. State On-Scene Coordinator's decision regarding wildlife response program:**

Request received by State On-Scene Coordinator:

Time: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_ Concur with wildlife resource agencies

\_\_\_\_ Concur with attached conditions

\_\_\_\_ Do not concur

Signature: \_\_\_\_\_ Time: \_\_\_\_\_

Date: \_\_\_\_\_

**B. Federal On-Scene Coordinator's decision regarding response program:**

Request received by Federal On-Scene Coordinator:

Time: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_ Concur with wildlife resource agencies

\_\_\_\_ Concur with attached conditions

\_\_\_\_ Do not concur

Signature: \_\_\_\_\_ Time: \_\_\_\_\_

Date: \_\_\_\_\_

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